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ABSTRACT

This journal issue, which is intended for individuals engaged in planning, providing, and evaluating learning opportunities in British further education (FE) colleges, provides a framework for selecting and evaluating teaching strategies for different learning situations. Among the topics discussed in section 1 are the following: key elements of change in FE; managing change; learner and teacher dimensions in the new FE; individual needs and flexibility; technology; and National Vocational Qualifications, General National Vocational Qualifications, core skills, and learning. The following topics are examined in section 2: designing learning events; general principles of teaching and learning; considerations in selecting teaching strategies; major teaching strategies (case study, coaching, demonstration, discussion, open and flexible learning, gaming and quizzes, group work, laboratory science teaching, lecture, role play, rote learning, simulation, skills practice, individual tutorials, and workshops); and combinations of teaching and learning strategies. The following aspects of evaluating teaching strategies are covered in section 3: purpose of evaluating teaching; evaluation methods; action research and the reflective process; and reflective practice and teacher development. Contains 10 figures and 69 references. Appended are two teacher evaluation checklists and two self-evaluation checklists for teachers. (MN)

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Transforming teaching:
selecting and evaluating teaching strategies

Carole Mitchell

Volume 1 Number 14

FE MATTERS

FEDA paper

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Transforming teaching:

selecting and evaluating teaching strategies

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Preface

Selecting appropriate teaching strategies for different learning situations is essential to effective teaching and learning. This report provides a framework for making these choices, and defines a range of teaching strategies, with guidance on their application and evaluation. It emphasises the principles of teacher as learner and reflective practice, and encourages peer appraisal. The guidance was generated with the assistance of an advisory group, and piloted in six FE Colleges. Feedback from the pilot led to further modification.

This guidance will be of interest to all those engaged in planning, providing, and evaluating learning opportunities in the post-16 sector: teachers, trainers, staff development officers, curriculum managers, teacher educators, and those in teacher education and training. The guidance will also be useful in the production of evidence for Training and Development Lead Body (TDLB) qualifications.

The report is designed to complement *Learning Styles* (FEDA/FEU 1995). That document suggests strategies for working with students to establish personal learning agreements, taking account of individual needs and learning styles. It demonstrates that identifying students' learning styles can raise their awareness of different approaches to learning. This, in turn, informs the process of negotiating personal learning contracts and action plans.

This report is divided into three sections:

Section 1. Teaching and learning in FE: the changing scene and the changing roles describes the key elements of change in FE, and considers how the needs of learners and the role of the teacher are evolving in the new FE environment.

Section 2. Selecting teaching strategies examines a wide range of teaching strategies, and offers a checklist and a framework for selection.

Section 3. Evaluating teaching strategies emphasises the value of reflective practice in professional development and quality assurance. It offers a model for reflective practice, considers how mentoring, appraisal, and professional development logs can be used to evaluate teaching and promote individual and organisational development.

1. Teaching and learning in FE: the changing scene and the changing roles

The modern post-16 curriculum is diverse and dynamic. The demands for greater flexibility, new technology, increasing participation and quality issues require us to take a fresh look at teaching and learning strategies.

The principle of lifelong learning and the growing emphasis on transferability of knowledge and skills in the face of rapid change, mean that teachers, too, need to see themselves as learners in this new learning environment.

A snapshot of teaching and learning in FE

For an indication of the very broad range of strategies available to teachers, and the complexity of the learning process, let's take a snapshot of the reception area of a typical post-16 college.

We see Yusuf heading for a GNVQ Health and Social Care class, and Gloria on her way to a lecture theatre for a management module on the first year of her degree programme. Clare is going out to run an in-house training session on office communication skills at a local factory, Phil is heading for an IT workshop, and Les is off to observe a primary school teacher, as part of a teacher training programme.

If we follow them to their destinations and put our heads round the doors, we see Yusuf and his peers enthusiastically acting out a hospital admission scene. The teacher observes, making notes for the debriefing session which follows.

Gloria is busily taking notes in the lecture, alongside 80 others, some of whom are listening intently, while others seem to be daydreaming.

Clare's students are working in groups of three on a telephone simulation exercise. They are making good use of peer appraisal which, in turn, assists the teacher's assessment.

Phil appears to be having difficulty with an IT function and is getting help from two peers. The teacher is occupied with other students.

Les is observing a large primary school classroom, where children are working either together or individually on a variety of tasks and topics. The teacher and classroom assistant are helping different children.

Some of these teachers may be working with teaching strategies they know work well for them in particular situations. Others may simply be using methods they find familiar and safe. Some may be experimenting with new methods.

Against this backcloth of diversity and complexity numerous changes are taking place within the FE sector.

The key elements of change in FE

Recent years have seen rapid changes in the FE sector in response to a wide range of challenges (See 'Challenges for Colleges', FEU 1994.) All of these challenges have direct or indirect effects on teaching and learning. The main driving forces for change can be summarised as follows:

Political pressure
Politicians are increasingly involved in the decision-making process relating to education and training. The Education Reform Act (1989), The Further and Higher Education Act (1992) and other legislation have transformed FE into a market-led, and customer orientated business.

Funding methodology
Financial viability is a paramount concern for incorporated FE colleges. Funding inevitably impacts upon the curriculum and how it is delivered.

Organisational development
To capitalise on funding opportunities, colleges are seeking more efficient means of providing effective customer services. Under the new funding regime, the colleges most likely to prosper are those characterised by flexibility, adaptability, creativity, opportunism, continuous improvement, a positive orientation

towards problem solving and a commitment to maximising their capacity to learn about their environment and themselves. Their staff will need to exhibit the same characteristics. This will require commitment to the ideal of the learning organisation, not just for students, but also for staff.

The need for flexibility
Flexibility of provision can be seen as the key to improving institutional performance, attracting wider participation and improving the efficiency of resource usage. It is also likely to equip learners better for flexible work technologies and labour markets.

Changing local needs
Colleges must take account of market intelligence if they are to make adequate provision. Changes in local industry, environments, politics, demography, competition and collaboration, all influence the curriculum delivery.

By providing equal learning opportunities and encouraging participation, colleges become agents of community development. They play an important role in breaking down divisions in communities.

Changing needs of the learner
The new FE sector views the learner as a customer who must first be attracted to the institution, and then retained and helped to succeed. In order to meet growth targets, colleges are offering 'products' to attract a wider range of customers with different needs.

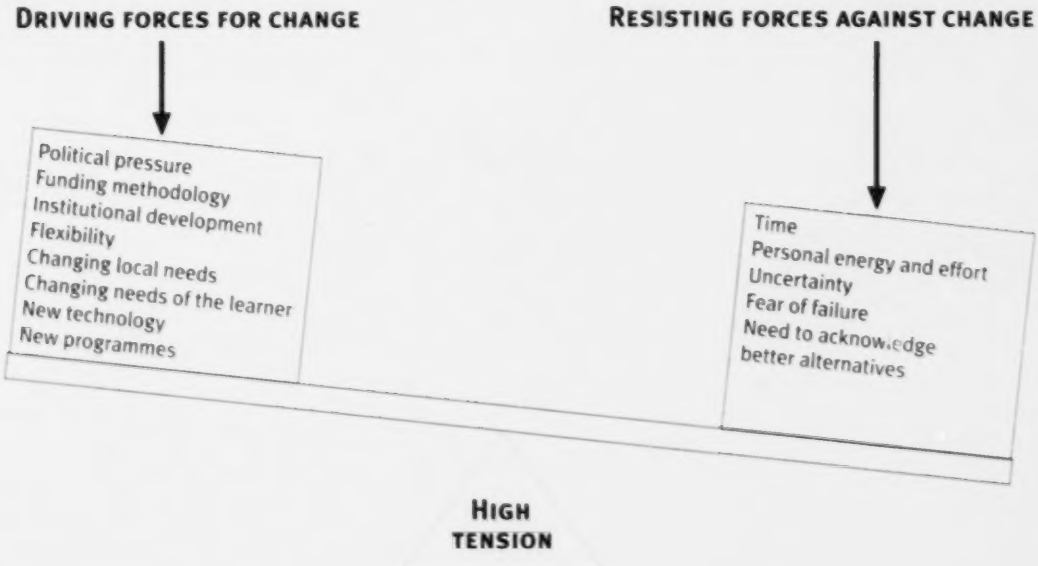
New technology in education
Continuing advancements in educational technology offer a new tool kit for teaching and learning. The challenge for teachers is to engage learners effectively with the new technology, without undermining the value of social interaction or distorting the cultural context of the learning.

New programmes
During recent years the array of programmes and qualifications in post-16 education and training has led to a degree of confusion. Alongside National Vocational Qualifications (NVQs) and General National Vocational Qualifications (GNVQs), some old programmes have survived and new ones have emerged. Teachers constantly need to consider what teaching and learning strategies best meet the requirements of particular programmes.

Managing change

People often resist change because of the personal costs involved: time, energy and effort, uncertainty, fear of failure, and so forth. It

Figure 1a. Slow change and high resistance model of change



also involves admitting that there may be a more effective or efficient way to do something. Therefore, most people need support in recognising the need for change and doing something about it. They may need support in managing the stress inherent in change. When change is forced upon people, the process may be slower and less effective. With appropriate support, there is likely to be less tension in implementing change. The change process is represented in Figures 1a and 1b.

Supporting change

In the context of educational restructuring and improvement, collaboration offers some solutions. Collaboration between staff at all levels and throughout the community results in:

- **Increased confidence.** Sharing the fears, frustrations, and failures provides moral support through challenging times.
- **Increased efficiency**. Pooling resources and sharing responsibilities eliminates duplication. Sharing increased workloads helps to reduce overload and feelings of isolation.
- **Greater effectiveness.** People working together are more likely to experiment with new ideas, producing greater diversity in teaching strategies. Constructive feedback and encouragement help to improve the quality of teaching and, consequently, learning.
- **Better communication.** Collaboration at all levels eliminates some of the uncertainty and misunderstanding that accompany change. Commonly agreed goals are likely to be realistic and achievable.
- **Increased responsiveness.** Pooling the knowledge, skills and experience of all members of the organisation enables it to identify and respond to needs and opportunities.

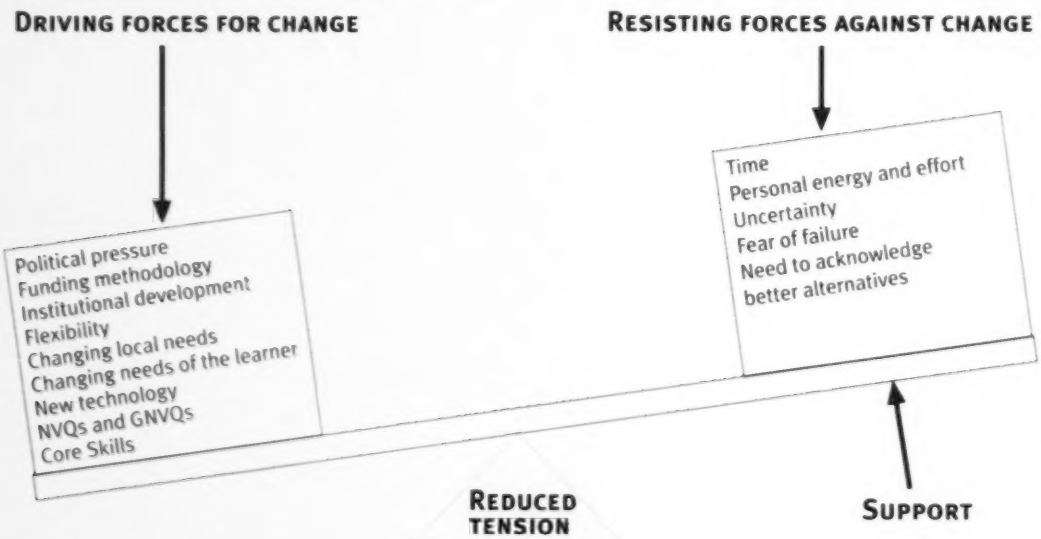
Accepting the need to change

It is clear that teachers need to develop strategies which take account of the changing system of post-16 education. The changes affect both teaching and learning.

The learner dimension in the new FE

People learn naturally as a part of living. In education, teachers build on that learning by focusing on the development of particular skills and abilities, through a systematic process in which the teacher is the architect of the content and the methods. Teachers need to understand

Figure 1b. Rapid change and low resistance model of change



how a student acquires, retains and retrieves the various forms of information and skills, because different students use different learning styles and strategies.

Teachers also need to help students develop the particular learning styles and strategies they need to fulfil the requirements of each of their programmes and courses. An understanding of the learning process is essential.

The learning process

There are many models of learning. A simple representation of the learning process is shown in 'The Learning Staircase' (Figure 2). In this model, learning is initially a four-stage process involving the conscious and unconscious mind. Learning is also cyclical: in order to change and develop, we need to retrace our steps, unlearn certain things, and relearn new things.

The process of learning to drive is a clear example. Although drivers may be qualified and experienced, really good drivers will recognise that they have acquired bad habits which need unlearning. They may benefit from stepping back to examine their practice and relearn, to raise their driving skill levels.

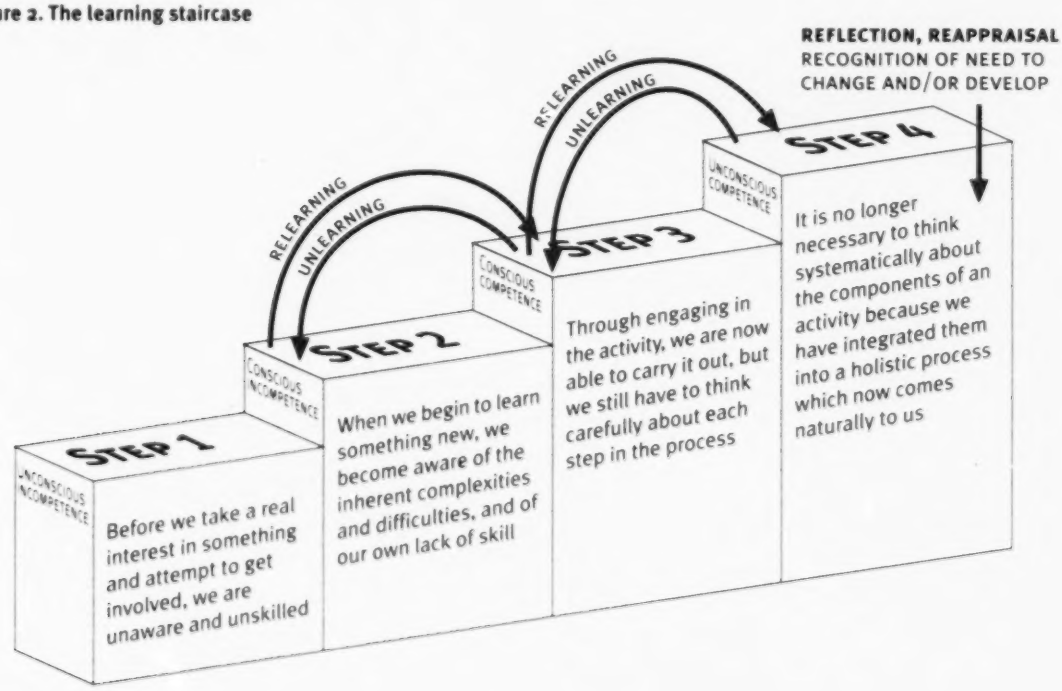
The Learning Staircase Model can also be related to learning to teach. There are few naturally gifted teachers. Most of us learn the skills incrementally until we are comfortable with them. However, as in the driving example, sloppy habits can develop, or we may not adapt to a changing environment. Really good teachers reflect on their practice, using feedback from students and peers. Where necessary, they unlearn and relearn in order to extend their choices and use them more flexibly.

Moving from familiar territory to explore new teaching strategies can be difficult. Alternative approaches may feel threatening without support and feedback from colleagues. The appraisal system can assist the process. Teachers who accept that they, too, are learners will avoid barriers between themselves and their students because they recognise a common purpose.

A common purpose

It is vital that the teacher and learner have a mutual understanding of the purpose of the learning event. This can be achieved through negotiation or joint examination of a programme's learning objectives or performance criteria.

Figure 2. The learning staircase


REFLECTION, REAPPRAISAL
RECOGNITION OF NEED TO CHANGE AND/OR DEVELOP
RELEARNING
UNLEARNING
RELEARNING
UNLEARNING
STEP 1
UNCONSCIOUS INCOMPETENCE
Before we take a real interest in something and attempt to get involved, we are unaware and unskilled
STEP 2
CONSCIOUS INCOMPETENCE
When we begin to learn something new, we become aware of the inherent complexities and difficulties, and of our own lack of skill
STEP 3
CONSCIOUS COMPETENCE
Through engaging in the activity, we are now able to carry it out, but we still have to think carefully about each step in the process
STEP 4
UNCONSCIOUS COMPETENCE
It is no longer necessary to think systematically about the components of an activity because we have integrated them into a holistic process which now comes naturally to us

Agreeing a common purpose involves drawing together these basic components:

- defining the learning task and expected outcomes
- understanding the teacher's role and the teaching strategies
- understanding the learner's role and the learning strategies
- recognising the context within which the learning will take place, and the use of available resources.

The process of negotiation, explanation, and agreement of these elements is represented in Figures 3a and 3b.

Learning in context

Learners have much better recall of learning in the setting where it originally took place. It can be helpful to imagine yourself in the original learning context; to create learning opportunities that approximate the job as closely as possible; and to consider how learning in the classroom and elsewhere can be transferred to real life situations.

Learning should be embedded in contexts to which students can relate. Meaning can be elaborated via analogy, simulation and metaphor. Simulated work environments can help prepare students for work in a safe and supportive way. Real workplace experience is particularly valuable.

Motivation

Because much of human behaviour is a product of habit, an important role of the teacher is to help students acquire good learning habits. This may require shifting attitudes about learning. The teacher can influence learners' desire to learn by taking account of individual needs and choices, equality of opportunity, achievable goals, rewards and incentives. But self-motivation is essential for independent and self-organised learning. It is characteristic of high achievers. Once kindled, motivation can be fanned through the appropriate teaching strategies.

Figure 3a. The basic components of the learning situation and the common purpose

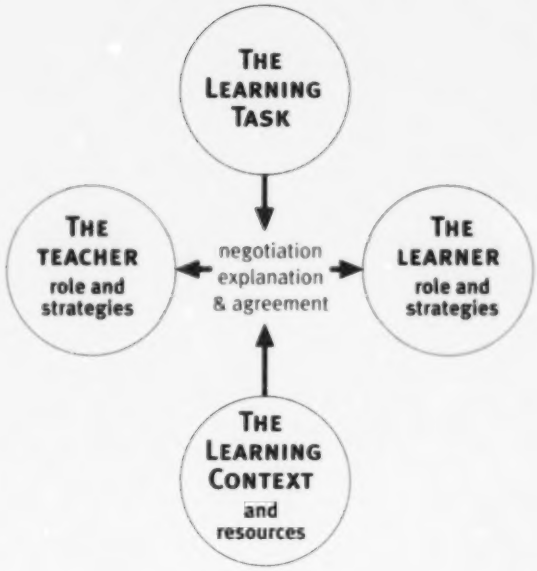
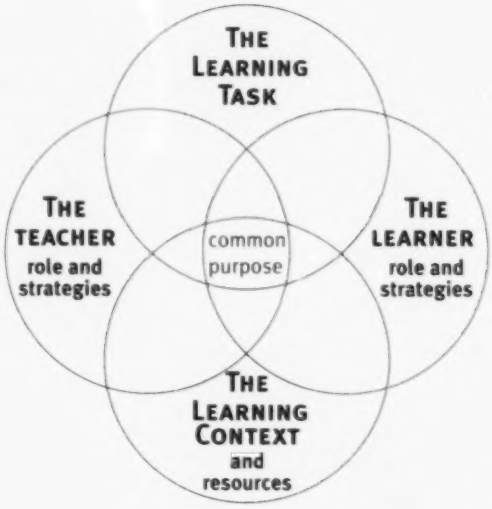

THE LEARNING TASK
THE TEACHER role and strategies
negotiation explanation & agreement
THE LEARNER role and strategies
THE LEARNING CONTEXT and resources

Figure 3b.


THE LEARNING TASK
THE TEACHER role and strategies
common purpose
THE LEARNER role and strategies
THE LEARNING CONTEXT and resources

Learning by doing

The ancient Greeks emphasised the enormous advantages of apprenticeship and learning on the job. Rehearsal is an important part of learning both vocational skills and the skills required for academic study. Learners need to be encouraged to test theory through experimental and experiential learning events or imaginatively structured flexible learning packages. They need to experiment and get a task wrong in order to recognise mistakes, analyse them and learn from them. As confidence develops, competence grows, while the teacher monitors progress to ensure that incorrect practice does not persist.

Note, however, that fear of failure may reduce motivation, and unnecessary chastisement for failure may lower self-esteem. If teachers are prepared to apologise for their own misunderstandings, students will be reassured that we all make mistakes.

Self-esteem and personal autonomy

It is important that students recognise their strengths and capabilities. Children's self-esteem relates closely to how teachers and parents respond to them. Those with low self-esteem are likely to underachieve educationally.

Self-esteem can be measured as the difference between the self-image and the 'ideal' self. Self-esteem and personal autonomy are learned characteristics. They can be boosted by positive guidance and optimism:

- Teachers should counter 'why I can't' statements with 'how I can' statements.
- Regular reviews of student progress help consolidate and recognise the learning that has taken place.
- Benchmarking helps in setting goals and understanding how others succeed.

Feedback

Approval from others and positive feelings about performance can be a strong incentive to continue learning. Derogatory remarks about poor work, and failure to praise good work can result in unsuccessful learning.

- Give feedback as quickly as possible, and make sure that the learner knows what has been done well, and why.
- If feedback is negative, label the act, rather than the person.
- Use flexible learning materials which incorporate self-assessment, and computerised learning programmes with built in feedback.
- Encourage students to use feedback to review and evaluate their own work. Peer feedback can be given in group work.

Reflection

Learners need the opportunity to absorb and make sense of their experience. The process of reflection has three main dimensions:

- a purpose or intent
- a restructuring or constructing function
- a linking, contextualising, and transforming function.

Reflection converts experiences into new ideas and action plans. It links thinking and action, and serves as a bridging mechanism for learning transfer. Reflection is essential to the teaching and learning process, because it provides the means to reframe past experiences to meet new challenges, and to transfer knowledge from one context to another.

One of the most useful skills a teacher imparts is the ability to think critically. Imparting facts and information is the easy and, arguably, dullest part of teaching. Doing so without giving students the time and strategies to analyse and absorb them can negate learning. Helping learners to conceptualise, reason and fathom out problems, and reflect on learning is potentially the most challenging and stimulating part of teaching.

Meeting the needs of individual learners

Each learner has an individual approach to learning. Teachers need to understand students' preferred learning styles and strategies and match them with appropriate teaching strategies.

FE serves an increasingly diverse community. Individuals arrive with a range of learning and support needs, different experiences, abilities and purposes. They may learn in a variety of ways, and in order to succeed in their learning, they may need some specific support.

The changing context

There has been a complete change of focus in the nature and delivery of the FE curriculum. Methodologies in which the teacher purveys a set body of knowledge to passive recipients are largely a thing of the past. The teacher is now a negotiator, enabling students to set desired learning outcomes, and a facilitator, assisting the student to achieve them. Teachers must be able to respond to a range of students, matching learning requirements to learning contexts.

Equally, expectations of the student's role are changing. Skills in listening, recording and regurgitating information are being overtaken by skills in investigating, action planning, problem solving and demonstrating competence and achievement. Students may need to learn how to study in new ways.

Key principles

- All students have a right to have learning, support and assessment needs met.
- All staff have responsibility for students.
- Tutors can expect to meet, and respond to, the needs of a wide range of learners.
- To respond flexibly, tutors need access to the widest possible range of teaching and learning strategies.
- There is nothing fundamentally different or special about teaching or learning for students who need additional support.
- Best practice in teaching and learning automatically includes most learners.
- If students have difficulty in learning, the likeliest source of the problem is how they are taught (but some students may need substantially more or different forms of support in order to learn).
- Such students are entitled to an assessment of their needs and a package of support to meet them.
- Not all tutors are expected to have specialist skills to meet very particular requirements.
- All tutors are expected to know when, how and where to seek support for themselves and their students.
- It is helpful to think in terms of individuals and meeting their particular needs. It is unhelpful to think in terms of groups with the same disability or learning difficulty. (Even if they seem similar, the approach for individuals may be completely different in practice.)

Meeting particular learning requirements

Additional support, where needed, may be provided in a number of ways, usually involving a partnership between course tutors and learning support staff.

Internal support services are available in most colleges, but some services may need to be purchased from external specialist support agencies. The mix depends on the size of the college, and extent and range of the curriculum.

The role of the support service is twofold: it is concerned with support for the student, and it provides support for the tutor.

See the FEU bulletin *External Support Services – meeting additional support needs* (Dec 1994); and

FEFC Circular 95/07 for information on the funding of support services.

Individual needs and flexibility

A college which is committed to providing support to meet individual needs will be better placed to offer flexible learning opportunities.

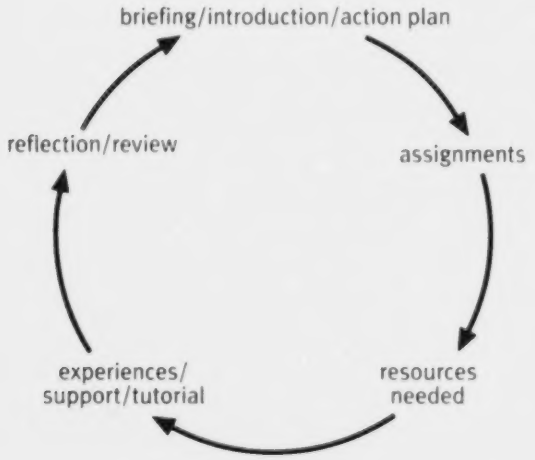
Flexible learning

Flexible learning is at the heart of a new learning infrastructure within FE colleges in which distinctions between full-time, part-time, and open learning provisions are becoming blurred. The terms 'open' and 'flexible' learning, not surprisingly, are used interchangeably, as they share the same fundamental principles:

- The learner is at the heart of the learning process.
- Learning belongs to the learner.
- Learning is enjoyable and follows individual needs.

This implies changes in the roles of learner and tutor. The tutor is not a teacher in the traditional sense, but acts as a Learning Manager to help and support learning, generally from specifically written packages. Tutor and learner share mutual goals. The learning process involves active participation by both partners (Figure 4).

Figure 4.



Open and flexible learning imply:

- active participation on the part of both learner and tutor
- increasing autonomy of the learner
- negotiation processes underpinning all stages of learning
- continuous guidance and support

with consideration of the following curriculum issues: access, content, means of learning, assessment method and times, support method, place of learning, and pace of learning.

There is a fundamental tension in the process between providing adequate support and assisting the learner to become more independent. It cuts across the notion that in order to learn, we have to be taught: everyone acquires knowledge by a variety of means.

Open/flexible learning is not new. It is just one of a range of teaching and learning strategies a professional teacher uses, often to overcome difficulties which a more traditional teaching strategy cannot answer. It seeks to remove restrictions on when, where, how and at what pace learners learn.

Open/flexible learning offers the following potential advantages:

- It focuses on the needs of the individual.
- It accommodates learners who need to work faster or more slowly than others.
- It provides a learning support mechanism for those who have not reached required standards.
- It offers a learning programme completely new to the learner.
- It can enable colleges to offer programmes for small groups of students, which previously may not have been economically viable.
- It can also provide learning opportunities for larger groups.
- It enables tutors to service the needs of more broadly defined groups, using larger rooms or workshops.

- Its responsiveness attracts a wider range of participants.
- It can be a more cost-effective way to deliver a learning programme.
- It can help overcome barriers preventing some groups accessing the college's provision, and thereby increasing individual access and participation.

Technology

The working environment is rapidly changing. Most occupations are increasingly dependent upon technological innovations. In the last decade, colleges have rapidly moved towards making computers available to everyone in open access centres. Colleges have integrated information technology (IT) into much of the curriculum, but in some areas of the curriculum it is not yet fully embedded. Many students still do little more than word process assignments.

However, as computers become cheaper, faster and more powerful, their potential increases. The technology itself is bringing about changes in the curriculum, and having a significant impact on learning processes.

IT core skills

Learners are encouraged to use IT in all aspects of their work, with growing curriculum emphasis on integration of core skills, including IT and communication. GNVQs encourage the use of technology in collecting evidence and enhancing students' presentations. Primary and secondary school pupils use multimedia competently and creatively to communicate information. These students come to FE already skilled in IT and colleges need to consider how to build on their skills.

Curriculum change

Students will always need to remember facts; but they also need high level information handling and retrieval skills. Some teachers argue that many skills required for 'A' level mathematics can be carried out successfully on a computer or calculator. Rather than practising repetitive, mechanical skills, students can now focus on understanding. Evidence from the National Council for Educational Technology *Portables in Schools* pilot indicates that children with increased access to technology can grasp maths and science concepts at a much younger age. The future significance of IT in learning and the curriculum cannot be underestimated.

Attitudes to learning

Other developments in technology are changing attitudes to learning. Using portable computers has led young people to gain self-esteem, become motivated, and produce more and better work. There are many reasons, among them the fact that they can work at home, extending flexibility and learning time. The use of portables and similar new technology as part of the learning experience is engendering changes in attitude towards IT for both college staff and students alike.

Delivery mechanism

Integrated Learning Systems currently enable students to follow a pre-determined programme of study in Mathematics or English at their own pace. With individual diagnostic assessment as part of the management system, teachers can effectively monitor the progress of all their students. Early results of research indicate that students are progressing faster and achieving better examination results with these systems. Though these are preliminary findings, FE and HE must look closely at such systems with a view to evaluating their effectiveness. Open Integrated Learning Systems (OILS) may enable the learning management system to be used across all curriculum areas. The systems may provide a better experience for some groups of students, and should be considered in long-term learning strategies.

Communications technology

High bandwidth communications are increasingly widespread and cheaper, and telematics (communications linked with IT) are becoming

a reality. Colleges have begun to provide learners with access to this technology. At one inner city college, black students studying 'The Colour Purple' shared ideas electronically with a group of black American college students.

Satellite links, Integrated Services Digital Network (ISDN) and cable in many homes give us the opportunity to make education accessible in the home, workplace, leisure or community centre. Fax, videophone and electronic mail can provide opportunities for distance learners to become less isolated. The Internet provides users with information from around the world, although its effective use in the curriculum is still in its infancy.

Indirect support

The use of IT in recording assessment allows accurate and reliable records of a student's progress, with rapid feedback to students. Tutorials are far more effective where a tutor can discuss a student's progress and action plan with up-to-date records of achievements in all areas onscreen in front of them.

A college Management Information System can improve organisational efficiency and effectiveness. Review of drop out and failure rates helps identify problems in course delivery, feeding back into course evaluation. It can lead to provision of better, more effective and more appropriate courses, and, consequently, better motivated students. Feedback from students, coupled with analysis of the requirements of local industry, can lead to a better deal for students, and equip them better for the working environment.

The future

Of course new technology, along with changes in teaching and learning styles cannot be introduced unless staff adapt to the changes in their working practice. IT can help the learner to learn, but may seem threatening to some teachers, because the new technology requires new approaches to teaching.

NVQs, GNVQs and learning

The introduction of qualifications such as NVQs and GNVQs, based primarily on assessment rather than delivery, has necessarily led to teaching centred on the individual's progress. The teacher and learner jointly produce a personal training programme based on units and elements specified in the qualification.

The change of focus from teacher to learner requires a greater degree of learner responsibility, including the choice of learning processes and types of evidence produced to prove competence. The teacher/assessor role has moved towards supporting the candidate, from delivery of learning to managing the process of learning. In many centres this has meant a shift from a classroom or didactic approach towards individual, small group, and resource-based learning. The recording requirements within these programmes has also meant that teachers must strike a balance between administration and 'teaching'.

The nature of GNVQs, with mandatory core skills units and the option of integrating units, has necessitated greater reliance on a team approach, emphasis on planning of delivery and assessment, and continual monitoring and review of candidates' programmes. Candidates must also generate evidence of planning, information gathering, and evaluation skills.

End of unit tests at set dates for mandatory GNVQ units have proved problematic for some teachers, who identify a conflict between candidates working at their own pace and being assessed at fixed intervals. A further area of conflict is that candidates must generate evidence of achievement of performance criteria while developing the underpinning knowledge. Imaginative teaching strategies are needed to resolve such conflicts.

Core skills and learning

Despite rapid technological advancements and changing working environments, some skills remain fundamental to all forms of employment. These core skills underpin all vocational

and academic achievement. They transfer across many life and work situations, and are, therefore, essential.

All teaching is increasingly focused on information seeking, problem solving, and communication. Integration of core skills across the curriculum:

- promotes the process of learning to learn
- facilitates gathering and recording evidence of skill acquisition
- enhances the ability to access a wider range of skills and knowledge.

Finally, if students are expected to achieve competence in core skills, their teachers must also be competent in core skills. Where teachers are lacking in core skills, it makes sense to use staff development opportunities to compensate.

The teacher dimension in the new FE

In the past, teachers may have seen their role as predominantly classroom based and subject centred. The role has changed dramatically. It can now be broken down into many component parts: advising, advocating, assessing, challenging the system, counselling, dealing with paperwork, enabling, evaluating, informing, keeping up with new developments, learning new skills and processes, liaising, negotiating, planning, referring, reviewing, teaching, updating skills and knowledge. The list is not exhaustive, but gives some indication of the diversity and complexity of the teaching role.

Teaching teams

Often FE teachers work in teams to design and deliver learning programmes, and there is much to commend this approach. Some examining bodies specify the team approach, often to promote curriculum integration. Teams can share expertise, skills and creativity. They may include student representation. They can pool resources, devise assignments, integrate subject disciplines, and avoid duplication. Teamwork usually assists the selection, use and evaluation of teaching strategies.

In GNVQ programmes, teamwork is essential. Without teamwork it would be impossible, for example, to ensure that students meet assessment requirements of core skills units at the appropriate level.

For effective course teamwork, ample time needs to be allocated for meetings. Agenda items can include programme delivery and teaching strategies, student support, assessment issues and so forth. The following checklist helps ensure that teamwork benefits all team members:

- Plan collaboratively for clearer understanding of teaching goals.
- Coordinate and share skills and knowledge to achieve a common purpose.
- Make sure all members share an understanding of the whole programme area, as well as their own roles and responsibilities.
- Reduce isolation and provide support for individual members.
- Test new ideas and new ways of working.
- Encourage reflection whereby others become 'mirrors' for individual practice.
- Promote continuous improvement in programme delivery by facilitating professional learning, reflection and reconstruction, and shared knowledge and expertise.

Teamwork can be problematic, however, if it is not well organised and effectively managed. The following are some of the possible pitfalls:

- suppression of individual flair
- overload with unnecessary administrative procedures
- individuals doing less or more than their fair share
- complacency arising from an overly cosy atmosphere and lack of recognition from management
- circular arguments or lack of direction.

Effective teams require building and maintenance. The following checklist can help ensure that the essentials of good teamwork are in place:

- a shared vision and commitment to common goals and purposes which are understood by all members
- clearly agreed and defined roles and responsibilities
- mutual trust, respect, rapport and support among team members
- agreed ground rules, action plans, targets, performance indicators
- an open communication system within the team and between the team and the institution
- strategies for making the most effective use of individual skills and ambitions
- strategies for managing conflict
- strategies to promote a positive atmosphere and responsiveness to change.

There are many methods of team-building, each using techniques and approaches which may suit some organisations more than others. Without a commitment to a planned and deliberate effort to promote effective teamwork, this method of working is unlikely to succeed.

Looking to the future

There has been an unabated period of change in FE in recent years. These changes have not always supported the ideals of a coherent system of post-16 education and training.

Teachers must raise their awareness of the education and training needs of the post-16 population as we approach the 21st century. Teachers can maintain a high level of professional involvement in influencing the delivery of the curriculum to meet these needs fully. This will require a reappraisal of teaching and learning strategies.

2. Selecting teaching strategies

This section describes a wide range of teaching strategies, and encourages teachers to use them creatively in designing learning events.

A framework is provided for considering the selection of appropriate strategies (Figure 5). The teaching strategies are initially presented in a checklist (Figure 6). Each is described with a rationale and a checklist for use.

Generic advice is given on the design of learning events and choice of teaching strategies. Some general principles of teaching and learning are noted.

Finally, an example illustrates how teachers incorporate a range of strategies into the design and delivery of learning events. It emphasises the value of combining strategies to meet the needs of particular contexts and learners. Teachers and teaching teams are encouraged to use the materials in this section as a stimulus to generate their own ideas and materials.

Designing the learning event

Teachers are the architects of learning, and any learning opportunity poses a design challenge for the teacher.

Planning a learning event can be likened to preparing a meal for friends. The number of participants, their characteristics, the available resources, setting and timing are all important considerations. The aim is an interesting, appetising, well balanced menu. The participants consume and digest all courses; they do not walk out, fall asleep halfway through or become sick; and at the end they feel replete and appreciative. Particularly memorable menus can be repeated time and again; others need to be varied continually to maintain interest. Few cooks are able to work with the most expensive resources; the real skill lies in creating interesting menus from relatively simple ingredients.

Applying the analogy to teaching, we can reflect upon whether our students are getting a sufficiently varied menu of teaching and learning, or whether their diet is stodgy and repetitive. Of course, we might happily offer repeatedly a favourite which never fails to go down well.

In recent years there has been continuing debate about the relative merits of 'progressive' and 'traditional' methods. Few teachers operate solely at either extreme of the spectrum. We reflect on whether our teaching recipes and menus provide nourishment and growth for students. We can begin by checking whether our teaching events embrace general principles of teaching and learning.

General principles of teaching and learning

Whatever strategies are selected, the following principles should be used as a general checklist for quality learning:

- Plan activities and organise resources.
- Involve learners in the planning process so that the teaching/learning event is seen as a partnership arrangement.
- Define the learning aims and objectives (if needed), and make sure that the students understand them.
- Design activities to meet the learning aims and objectives, taking account of students' needs and characteristics.
- Specify assessment and evaluation procedures.
- Remember that the purpose of teaching is to help people learn.
- Hold high expectations of your students and require professional standards.
- Show students what you are thinking as well as what you are doing, by giving careful explanation and justification.
- Consider whether your use of strategies promotes enthusiasm and commitment, which are essential to high quality learning.

Figure 5. A framework for selecting and evaluating teaching strategies

1 Take account of:

- objectives to be achieved within the learning programme
- the changing teaching role
- the learner dimension and the learning process
- team, organisational, work, community and national perspectives.

2 Select appropriate strategies from the checklist (figure 6), with reference to the following grid:

When you want to:	Large group	Small group	Individual	Distance
develop knowledge				
develop understandiing, thinking and problem solving				
develop attitudes and feelings				
develop skills				
integrate skills, attitudes, knowledge and understanding				

3 Experiment, practise and develop teaching strategies through action research and reflective practice.

4 Assess learning process and learning outcomes and seek feedback.

5 Evaluate strategies

Figure 6. Teaching strategies checklist

This checklist is used to comment on and evaluate your use of the teaching strategies.

Teaching strategies	Have used			Have not used			Comments
Case Study							
Coaching Programmed instruction Mastery teaching Personalised system of instruction Precision teaching Shaping							
Demonstration							
Discussion Debate Round robin							
Flexible learning Open and distance learning Resource-based learning							
Gaming and quiz							
Group work Task group Idea storming Buzz groups Ice breaker and warm-up exercise Dyads Triads Pyramid groups Crossover groups Horseshoe groups Syndicates Action learning sets							
Laboratory science teaching							
Lecture Mini lecture/lecturette Seminars							
Role play							
Rote learning							
Simulation							
Skills practice/practical							
Individual tutorial Group tutorials Peer tutoring Question and answer							
Workshop							

See pages 20-39 for detailed descriptions of individual strategies.

- Use humour, puns, analogy and metaphor to assist the learning process.
- Help learners switch from learning strategies that are clearly not working for them.
- When assessing learning, consider the process and not just the outcomes.
- Use evaluation to improve the teaching and the learning.

Considering teaching strategies

Teaching is a complex activity that requires a problem solving approach. People can acquire the same competencies by very different routes, and individual needs and differences must be carefully considered. Parallel groups on the same programme do not necessarily respond similarly to the same teaching strategies. This fact becomes less frustrating and more intriguing when the teacher accepts that every student group is different because it is made up of individuals, all with their own characteristics.

Some teaching strategies, however, are more appropriate for particular disciplines, particular topics/skills, students, times or places. The checklist (Figure 6) lists a range of teaching strategies, with space for your comments and evaluation of your use of the strategies. Comparing your list with those of colleagues will facilitate monitoring the effectiveness of useful-sounding strategies.

The checklist of teaching strategies can also be used with the framework (Figure 5) as a reflective tool for considering which strategies will be appropriate in particular contexts:

- some strategies are useful for helping students access knowledge
- some can promote understanding and concept formation
- some are particularly appropriate in dealing with attitudes and feelings
- some facilitate the development and practice of skills.

Given the diversity of FE, it is not possible to offer fixed prescriptions. Action research and reflective practice are needed to determine which strategies work most effectively in a particular set of circumstances. Many strategies overlap, and many can be combined. Reflective practitioners are likely to devise creative ways of using the strategies; the more they use and combine, the better they are equipped to support different learning styles. They also become more confident in taking risks, more flexible and more trusting of their instincts.

The teaching strategies

In the following pages, the major teaching strategies in the preceding checklist are listed in alphabetical order and described under the following headings:

- What is it?
- Why use it?
- When should it be used?
- Who is it suitable for?
- What resources might be used?
- How can the learning be assessed?
- How can the strategy be evaluated?

A list of key points is provided for each as a reminder for teachers utilising the strategy. Allied strategies are described (in less detail) in the order set out in the checklist.

Case study

What is it?
A case study considers a given situation or problem, usually based on a work situation or real-life occurrence.

Why use it?
It is a useful way of requiring students to think about, or take decisions about, a particular situation which may occur in real life. It is useful for examining job related problems.

When should it be used?
It should be used when students need to consider the complexities or issues surrounding particular cases. It can be used to consider why and how things go wrong.

Who is it suitable for?
It is particularly useful for students on vocational training programmes, but has wide applications and is appropriate for most students. It can be used for individuals or groups.

What resources might be used?
Good case study material can be extracted from books, journals, newspapers and real life. Case studies can be presented in hand-outs or incorporated into open and flexible learning materials.

How can the learning be assessed?
Through observation and judgement of decision-making and problem solving processes, and the outcomes; self-assessment and peer assessment.

How can the strategy be evaluated?
Through direct feedback about the relevance, accuracy and realism of the case study. By considering learning outcomes.

Case study key points:

- Provide well devised, realistic cases, giving essential information (and perhaps some irrelevant information) to help students to extract the important issues.
- Provide well structured information about the purpose of the study/ programme, the expected learning outcomes and clear procedural guidelines.
- Ensure good use of the decisions taken, through exploring the consequences.
- Use case study as a test or examination item.

Coaching

What is it?
Coaching is the process whereby one person provides guidance to another to improve performance, through modelling and direct instruction. It is usually associated with sports but can readily be applied to vocational and academic subjects.

Why use it?
It breaks down the component parts of a task, indicates the individual performance requirements for each part of the task, and shows what to do and how to improve. It can be a useful way of unlearning and relearning.

When should it be used?
It is particularly useful for developing complex skills which can be broken down into component elements.

Who is it suitable for?
Individuals or small groups who require help in improving, refining, or relearning skills.

What resources might be used?
They vary according to the nature of the activity. Coaching need not necessarily be carried out in the context in which the skill will be performed, but it may help. Video clips may be helpful in illustrating the skill

How can the learning be assessed?
Through direct observation, performance can be assessed and problem areas targeted.

How can the strategy be evaluated?
Self, peer and teacher evaluation can be used to consider the effectiveness of the process and the outcomes.

Coaching key points:

- Prepare activities and resources to target the identified needs of students.
- Set clear aims and objectives.
- Break down the activity into component parts, and gradually build up the skill by combining the parts to help the student master the sequence.
- Demonstrate the entire procedure; explain the links of the chain in sequence; demonstrate the skill step by step.
- Allow ample time for practice immediately after demonstrations. Several repetitions may be necessary.
- During practice, give verbal guidance. Talk them through mistakes. Avoid 'you must'; say 'I'll help you to'.

- Carefully observe and give feedback on students' actions, correcting errors where necessary.
- Praise and encourage when possible.

Strategies allied to coaching

Programmed instruction

This can be used when a learning programme has specific methods and unambiguous goals, and can be followed step by step. It can be used to teach something to many different people, or be tailored to meet an individual's needs. Most programmes are designed to deal with one specific area of learning. Programme instruction can be delivered via a number of modes, including open learning, educational technology and direct teaching. The essential features are:

- clear and specific aims and objectives
- explicit learning procedures expressed step by step
- availability of the necessary resources and explanation of how to use them
- clear and specific assessment procedures.

Mastery teaching/learning

This is a systematic approach to effective learning comprised of the following elements:

- review and check previous learning
- set clear objectives
- provide information effectively using clear, simple illustrations, modelling, demonstration, analogies, and clear communication
- check for understanding and give guided practice
- allow for independent practice
- monitor progress, giving quick feedback.

Using the mastery approach, the teacher breaks down a course into units of study, each with a small number of specific objectives. Achievement can be determined by the number of units completed at the required standard. The approach is flexible in that students work through a programme at their own pace.

Personalised system of instruction/ Keller Plan

This is closely linked to mastery learning and is particularly suitable for open and flexible learning. It is a useful way to deliver academic subjects or those which involve digesting much written material. Course reading can be broken down into small units, each with specific goals and study guides. Students progress at their own pace. There is regular testing for knowledge and understanding, and immediate feedback. Students do not move on from a unit until they have mastered it. Usually, repeating the same materials again will not help, and the unit will have to be approached differently.

Precision teaching

Precision teaching is a way of training students to operate in a very precise manner in performing particular skills. It is particularly useful for developing skills where there is no margin for error and a uniform approach to carrying out the task. The technique is useful for teaching people to use specialist equipment via:

- clear aims and objectives
- step by step approach
- precise instructions and guidance through each stage of the activity
- careful detection and correction of errors
- precise assessment and feedback.

Shaping

'Shaping' takes its name from the art of pottery. As potters shape clay into the desired form, teachers attempt to shape students' behaviour by rewarding successive approximations to the target. The strategy can be useful in teaching students with severe learning difficulties.

Complex behaviour or skills can be broken down by task analysis into small stages or steps. The behaviour/skill can then be shaped by backward or forward training, and chaining of components.

Forward training. The first step of the task is taught, then the second step is added, and so

on. It is important to acknowledge the successful completion of each step in the chain.

Backward training. The last part of the task is taught first, then the next to the last step is added, and so on. Training proceeds backwards until all steps are learned.

Chaining. Once taught, by forward or backward training, the components can be linked together by chaining. Each link is forged and then joined to existing links, eventually resulting in a chain of behaviour which matches the target task.

Demonstration

What is it?
Demonstration involves the display and explanation of a practical skill.

Why use it?
To show correct methods and techniques to students. To link theory and practice.

When should it be used?
Prior to an opportunity for students to practice a skill. When incorrect practice needs to be rectified or a new skill is introduced.

Who is it suitable for?
Students needing to acquire particular skills. Individuals or groups, providing all can experience the demonstration

What resources might be used?
All the materials and equipment needed to demonstrate the skill, set out as appropriate. A video recording of the skill may be useful

How can the learning be assessed?
Through practical repetition by students.

How can the strategy be evaluated?
Through student feedback and observation of how students interpret the skill.

Demonstration key points:

- Prepare well, check materials and equipment, and note health and safety issues.
- Explain the procedures and rationales carefully, emphasising key points and using a step by step approach.
- Practise the technique beforehand to ensure a skilled performance.
- Consider breaking down a complex skill into component parts.
- Consider timing: a fast activity might be done at normal speed, then slowed down, then repeated at normal speed.
- Ensure that all students can see, hear, and experience the activity. (Will mirrors, microphones or video monitors help?)
- Encourage and respond to questions.
- Follow the demonstration with skills practice by the students.

Discussion

What is it?
Students express opinions and share views on a particular topic. It requires introduction by the teacher or an informed student, and careful management to ensure that everyone has an opportunity to participate and a useful focus is maintained. It should be carefully planned with objectives and ground rules established.

Why use it?
It develops communication and presentation skills. It generates ideas and possibilities, and encourages awareness of self and others. It can give the teacher a snapshot of existing attitudes and knowledge within a group.

It is particularly useful for exploring and influencing opinions, beliefs and attitudes, and developing communication skills. It requires student participation.

When should it be used?
Discussion can be a follow-up to a video, lecture or visit. It can provide a break in formal teaching, and encourages independent learners to share ideas when they come together. It can be used to open up or review a topic.

Who is it suitable for?
Discussion can be difficult to manage amongst a large group, and equal and open contributions may be prevented. It is more suitable

for small groups, and can be used as a group work technique. It is useful for students who need to develop self-expression; those whose experiences and views can be usefully shared; and those needing to consider attitudes. However, students may feel pressurised to express an opinion, or focus on their own input to the extent that they do not learn from others.

What resources might be used?
Seating should facilitate good communication: students should be able to share eye contact, and hear each other clearly. It may be useful to make a note of the question to be addressed and its key points on handouts, a board or flipchart. Time limits can be set.

How can the learning be assessed?
The teacher can use a marking scheme or checklist to assess:

- the quality of individual contributions
- the discussion process
- the extent to which objectives were met.

Students can assess their own contributions and those of their peers.

How can the strategy be evaluated?
The strategy can be evaluated by teacher, peer, and student review, and reflection upon the process and outcomes of the discussion.

Discussion key points:

- Organise room layout to facilitate eye contact.
- Plan the topic and consider whether it would be useful to require students to do some preliminary research.
- Introduce the topic clearly, and establish time limits and ground rules.
- Monitor the discussion and keep it on track.
- Encourage the development of listening skills, self-expression and turn-taking.
- Ask for fuller explanations from students whose contributions are too brief or quiet, by prompting and probing. Praise their efforts. Avoid causing embarrassment.
- Require verbose students to be clear and concise.
- Restrict your own input, giving information where necessary.
- Manage the time carefully to ensure the topic is covered with equal contributions. Allow sufficient time for review.
- Encourage students to review and summarise key points, and then summarise the main issues yourself.
- Share teacher time evenly between small groups.

Strategies allied to discussion

Debate

This is a more structured form of discussion in which different sides of an argument are represented and explored. It can be organised very formally, with a pre-selected motion for debate. As preparation, students can be briefed with newspaper cuttings, video clips, handouts, and so forth. Students can be assigned or elected to roles of chair, proposer and seconder for and against the motion. As an element of competition, the whole group can vote on the outcome of the debate.

There can be more than two sides to the argument. For example, four points of view might be represented by groups in four corners of a room, each group trying to win over members of the other groups or 'floating votes' in the centre of the room. The teacher can summarise and extract the key learning points.

Uses:

- promotes public speaking skills
- very good for examining contentious issues
- develops critical thinking skills
- encourages self-expression, recognition of values and beliefs, and personal commitment

- develops communication skills
- provides a structured forum.

Round robin

In this activity a group member is invited to express an opinion, make a suggestion or state certain facts about a given topic, within a strictly limited amount of time. Alternatively, all group members are asked, in turn, to complete a sentence (eg, 'It is important that we all know the fire evacuation procedures because . . .'). Afterwards members are asked to recall as many of the statements as possible, or to categorise the ideas.

Uses:

- encourages participation and self-expression
- generates ideas about a topic
- immediately establishes a ground rule which prevents domination by any one individual
- can be used to test listening skills and memory
- can be used as an ice breaker (eg, everyone completes 'The funniest thing that every happened to me is . . .' or 'If I won the Lottery I would . . .').

Flexible learning

What is it?

This is an 'umbrella' term encompassing the following:

- a management tool which enables institutions to respond more easily to individual learning needs
- a system which aims to remove barriers to learning for a variety of client groups
- a means of giving learners a choice as to what, where, when and how they learn
- a system based on negotiation regarding action planning, teaching, reviewing and recording of achievement
- a system reliant upon specially designed resources and materials, in a variety of media, which support the individual learner in achieving negotiated targets.

Why use it?

To facilitate and increase participation and motivation by meeting individual learning needs. To overcome barriers to learning that block some students' access to the college's provision. To add choice and flexibility to a learning programme.

When should it be used?

As part of a structured college-based learning programme which includes these elements:

- classroom/group-based didactic teaching
- tutorial support
- access to generalist study centre provision
- access to subject specific flexible workshop provision
- self-study.

Who is it suitable for?

College-based students who have acquired the appropriate level of study skills to move towards becoming more independent learners.

What resources might be used?

- Specially devised material to allow learners to progress at their own pace. This could be bought from commercial companies (see 'Open Learning Directory') or produced in-house, using existing staff expertise to produce study guides or Open Learning packages. Both options are expensive, either in terms of money or staff time!
- Workshops, resource centres, libraries may be needed to store materials.
- Tutorial support is needed to provide the vital underpinning support framework which will ensure the learner's motivation and retention.

How can the learning be assessed?

Through self-assessment questions, multiple-choice questions, tutor-marked tests and assignments, oral questions, practical situations, tutorials, and so forth.

How can the strategy be evaluated?

- evaluation of resources should be built into the programme
- student questionnaires
- informal feedback to learning manager
- tutorial sessions
- evaluations of learner retention and achievement rates
- regular student quality assurance surveys.

Flexible learning key points:

- Staff are trained and skilled in tutoring and listening skills.
- Appropriate accommodation and resources are supplied.
- Staff have 'ownership' of flexible learning ethos and promote its use to students.
- Staff are familiar with material and questions likely to arise.
- Staff are trained and skilled in writing materials.
- Staff arrive promptly to ensure accommodation and resources are organised.
- Staff understand clearly what needs to be achieved.
- Appropriate tasks and assignments are set.
- Feedback is constructive and specific.
- Staff are able to listen carefully to all the learner is saying, including implicit, as well as explicit issues.
- Staff are friendly and supportive at all times.
- Deadlines are set, met and followed up if necessary.
- Administration is correct and simple.
- Staff ask questions, rather than give answers.
- Staff always work in partnership with the learner, not in control.
- Prior learning is recognised and valued.
- Staff are trained to provide a structured learning path towards a stated goal and to manage the learners' progress.
- Staff are trained in assessing available learning resources and supplementing them where necessary.
- Staff are trained to counsel learners in independent learning strategies.
- Study plans/contracts are used to set goals and outline procedures.
- Study support is provided as appropriate to learners' needs.

Strategies allied to open and flexible learning

Open and distance learning

What is it?

Open Learning has been described as follows:

> *Open or Distance Learning students are those who study with specially prepared learning materials for their private study and are provided with a marking and comment service for their written work which may be accompanied by some counselling or tutorial support . . .*
>
> *. . . is essentially home based distance learning and assumes an effective tutorial and marking system.*
>
> *Recurrent Funding Methodology*, 1995/6 (FEFC)

Open and Distance Learning are essentially resource based. The resource structures the learning and assessment process. Distance Learning looks back to correspondence courses, where the learner rarely, if ever, meets the tutor/assessor.

Both are responses to an internal shift towards client-centred services and external pressures to increase the participation of non-traditional students.

Why use it?

- It usefully requires students to think about, or take decisions about a particular situation which may occur in real life.
- It is useful for examining job related problems.
- It facilitates participation and motivation by meeting individual learning needs.
- It overcomes barriers to learning that prevent some groups of students accessing the College's provision.
- It add choice and flexibility to a learning programme.

When should it be used?
As a stand alone learning programme with clear aims and objectives, structured content, formalised assessment procedures and accredited learning outcomes. It uses structured learning resources and is closely linked to tutorial support.

Who is it suitable for?
For a wide variety of learners, both within and outside the institution, including shift workers, people with disabilities, those living at a distance from college, people with family or work commitments who cannot attend on a regular basis, and those who wish to study at a faster or slower pace.

What resources might be used?
As in Flexible Learning, specially devised material to allow learners to progress at their own pace; workshops, resource centres or libraries; tutorial support.

How can the learning be assessed?
Through self-assessment questions, multiple-choice questions, tutor-marked tests and assignments, oral questions, practical situations, tutorials, etc.

How can the strategy be evaluated?
As for Flexible Learning: evaluation of resources; student questionnaires; informal feedback to learning manager; tutorials; evaluation of learner retention and achievement; regular student quality assurance surveys.

Resource-based learning

This strategy shifts the focus of the learning onto particular resources, which can take a variety of forms. The responsibility for learning is with the student, and learning comes about through interaction with resources. The teacher's role is to manage the resources and the learning programme, by selecting and developing resources, ensuring access to resources, receiving, giving and managing feedback. Learning often takes place in generalist Learning Centres or Bases which focus on specific subjects. Such facilities are seen as extensions of the students' learning programme.

Gaming and quiz

What is it?
This technique facilitates learning by playing games and quizzes. It reduces unhelpful divisions between work and play, and can be a fun way to learn. The technique can involve both competition and co-operation. Learning games and quizzes can be purchased as commercial packages, or they can be devised and produced by teachers and students. Familiar games can be adapted for specific learning purposes. Rules should be clearly established.

Why use it?
A potentially boring topic can be made fun by presenting it in the form of a game or quiz. It can stimulate learning by presenting information in a different, more creative form.

When should it be used?
The introduction of a game can add variety to a more formal teaching situation. It introduces social interaction and stimulation. It is a flexible strategy which lends itself to various contexts. Educational computer games and quizzes can be used at any time to assist learning.

Who is it suitable for?
Most people enjoy games and quizzes, but the strategy is particularly suitable for students lacking the skills and motivation to cope with formal techniques. While self-motivated, learners may perceive gaming as trivialising a topic, play and humour can enhance learning. Games

and quizzes can be played by individuals and teams, and can be a form of group work.

What resources might be used?
Games materials, quiz sheets, scoring sheets should be available in sufficient quantities. Arrange seating to provide adequate space for playing according to the rules.

How can the learning be assessed?
A quiz can be used to check knowledge and understanding. Games and quizzes can involve problem solving; both process and outcomes can be assessed by students, peers and teacher.

How can the strategy be evaluated?
Games and quizzes are best evaluated through observation and immediate feedback. The teacher should consider whether the relevant learning was extracted from the context.

Gaming and quiz key points:

- Consider and discuss which topics could be taught by gaming, particularly topics and information whose presentation has previously proved to be boring.
- Discuss the purpose with students, and explain procedures.
- Establish the rules of the game.
- Adapt existing games and devise new ones, involving students where possible.
- Consider developing educational technology as a medium for learning through games.
- Allow time to extract and assess the learning that has taken place during gaming. Elaborate on how it transfers to other contexts.

Group work

What is it?
It is a means of teaching through social interaction, working together, and learning collectively and collaboratively. It can be any activity where two or more people pool their knowledge, feelings or skills to achieve a common purpose or shared experience.

Why use it?

- To enable students to work together in communication with each other
- To promote interpersonal, leadership , team role and participation skills and understanding of group processes
- To address tasks which require the division of labour
- To make more efficient use of resources
- To share knowledge and skills.

When should it be used?

- When you want students to pool experience, ideas, information
- When more than one person is available to learn at any given time
- When students need the stimulus of social interaction.

Who is it suitable for?

- For students who need to develop interpersonal skills
- For students who prefer to work collaboratively with others
- For students training for employment which requires working co-operatively and collaboratively with others.

With experience, teachers can team students with complementary characteristics. With thoughtful allocation of group roles and responsibilities, individual students can learn to become more effective. Working within a small group on a big task, students are often prepared to take on roles and responsibilities that they would not normally attempt.

What resources might be used?
A large room where all students can congregate, and/or a number of small rooms where groups can carry out tasks independently. Groups of independent learners can be encouraged to organise their own settings and resources.

Cable TV and teleconferencing offer the potential to create a virtual classroom, with a teacher in one place and students in others, while retaining the opportunity for social interaction.

How can the learning be assessed?
By observing and judging group processes and outcomes; by peer assessment.

How can the strategy be evaluated?
By considering whether students achieved the intended outcomes and goals, and whether the group process enhanced their efficiency and effectiveness; and by group feedback.

Group work key points:

- Carefully consider group size, taking account of the nature of the task, resources, time and so forth.
- Aim for balanced participation, with consideration of group composition in terms of friendships, hostilities, complementary knowledge and skills, gender, age, residence, ethnicity and so forth.
- To obtain a random group allocation, simply decide on the number of groups required (eg, three) and count round the room (1, 2, 3) until everyone is allocated a number. Then bring together all the number 1s, 2s and 3s.
- Consider the relative merits of maintaining the same working groups or varying group composition.
- Set clear, specific group tasks. It is useful to write out the task and desired outcome clearly, and then check that groups understand and are 'getting their act together'.
- Set clear time limits where appropriate, so that all the groups work to the same deadline, with sufficient time for feedback, review and evaluation.
- Model good leadership skills by managing groups effectively.
- Give students increasing responsibility as they develop the skills of learning in groups.
- Maintain a positive and supportive working atmosphere.
- Ensure student awareness of both the group task (what the group is working on), and the group process (how the members are working together).
- Where appropriate, set ground rules.
- Promote listening skills.
- Offer choices .
- Focus on building self-esteem.
- Keep learning under continual review.
- Assist learning with good group observation skills and feedback. Take account of patterns of participation, roles and responsibilities in the group's power structure, the decision-making processes, the communication system, the task, and the general ambience of the groups.

Strategies allied to group work

Task group

This is a group set up with a specific task to perform.

The task should be clearly defined with set objectives. Written task sheets are helpful. Committed groups should be able to operate without teacher involvement. The task group may incorporate other strategies, eg idea storming beyond the initial briefing, and subsequent debriefing and assessment.

When to use task groups depends largely on the nature and size of the task. Group work can take longer than teacher centred methods and, if time is very limited, may not be a good choice. It can be both time consuming and tedious, for instance, where a large group of students is arranged into small groups, all working on exactly the same task and reporting back on the topic. It is preferable to divide a task into component parts, and assign small groups to work and report on different elements. This can save time and produce variety, providing that all students can access and assemble the component parts of the task.

In considering this method, teachers should be aware that:

- Task groups can give individuals the opportunity to 'hide' or to shirk individual responsibilities. Some people will put less effort into a task when responsibility for the outcome is shared.
- Competition between, or comparison with, other groups can be used to stimulate enthusiasm, but competition can also be destructive.
- Some tasks are simply too big for one person and require division of labour.
- Groups can make more efficient use of resources.
- Existing knowledge, attitudes and skills can be shared (the whole is greater than the sum of the parts).
- Social motivation is usually higher in the presence of others.
- The presence of others can lead to increased productivity.
- Groups can produce more ideas and more solutions to problems.

Uses:

- develops self-discipline and responsibility
- promotes co-operative working relationships
- raises awareness of group processes
- utilises complementary skills, ideas and knowledge
- incorporates a variety of ideas and approaches in problem solving and decision making.

Idea storming

Individuals are invited to focus on a particular theme or problem and verbalise any idea or solution that comes to mind. Every idea and solution is noted down as it arises. No idea is judged or rejected at this stage. After the initial stage is completed, ideas can be grouped, and the most appropriate selected for further study and investigation. It is essentially a creative problem-solving technique.

Uses:

- encourages participation
- can be done quickly with few resources
- develops creative thinking
- can be used to 'open up' a subject, and set it in context prior to a more thorough study
- generates varied, sometimes unusual, solutions to problems.

Buzz groups

The 'buzz' is the noise generated when a large group is divided into small groups (maximum six) to discuss a clearly defined situation or problem for 5-10 minutes. Every member of the group is required to contribute. The manner of feedback (spokesperson, flipchart) should be clearly stipulated. Feedback is then integrated into the learning programme.

Uses:

- can be incorporated into a lecture to encourage participation, feedback and evaluation
- produces a quick overview of collective knowledge and opinions
- can serve as a warm-up or ice breaker because it gets people interacting
- can provide a useful break in a formal teaching situation
- can become a pyramid (see pyramid strategy) with groups subsequently combining
- can develop into a large group discussion of the whole or parts of earlier deliberations.

Ice breaker/Warm-up exercises

These are used at the beginning of a course, programme or session to help group members relax, get to know one another, and focus on group processes. They can accelerate social interaction and group cohesion. Exercises may take the form of games, information checklists, and so forth.

This strategy should be used with caution and sensitivity, because it sometimes results in the

reverse of its intention. Students may find certain exercises threatening or embarrassing, for instance those involving physical contact. Teachers need to consider whether time constraints and contexts make it more appropriate simply to issue name cards/badges and let people use their interpersonal skills to get to know one another. However, when planned and used well, they really can 'break the ice'.

Uses:

- helps people to get to know each other's names and something about each other
- can reduce the tension of meeting with strangers in an unfamiliar setting
- particularly useful in programmes using mostly student-centred and group work methods
- can promote social interaction, group cohesion, and interpersonal skills.

Dyads/Pairs

This is a paired student working situation.

Uses

- as an ice breaker
- to develop communication skills
- to practise interviewing
- to share ideas/experiences
- to support learning.

Triads/Threes

Groups of three students work together. Usually two work on a particular task (such as interviewing or counselling), and the third acts as an observer, providing feedback. Activities can be repeated for balanced participation.

Uses:

- develops interpersonal and communication skills
- develops observation and feedback skills
- supports learning
- enables sharing of ideas and experience.

Pyramid groups/Snowball

A large group is divided briefly into pairs or threes to discuss a situation, produce a definition, or suggest a solution. The small groups are then combined for a further short period to compare notes, agree a solution or definition and so forth. These groups can then combine into increasingly larger groups, hence 'pyramid'. Careful time management is required.

Uses:

- generates alternatives and comparisons
- promotes participation, interaction and negotiation
- useful as an ice breaker because it introduces the student to progressively larger groups
- provides movement and variety
- short time limits promote focus.

Cross-over groups

A large group of students is broken down into small groups, each looking at a particular issue from different a perspective (eg, elderly, disabled, wealthy or unemployed people). Then the groups are mixed to discuss the issue with a broader representation.

Uses:

- encourages students to look at an issue from different viewpoints
- creates variety and movement
- develops communication skills.

Horseshoe groups

A relatively large student group can be divided into smaller groups arranged in a horseshoe formation with an open space at one end. The teacher is able to join each group at the end of the horseshoe, without rearranging furniture.

Uses:

- enables the small group to maintain eye contact and cohesion, whilst facilitating inclusion of the teacher
- enables the teacher to circulate quickly; ensure groups are 'on task'; monitor progress; provide information and guidance.

Syndicates

A large group is divided into groups of four to six to conduct some research or an enquiry into a topic. The smaller group breaks down the task

into component parts and each member investigates a particular part. The group then makes a presentation, or writes a joint report. Clear instructions, time scales, reference points, and study skills preparation should be given.

Uses:

- develops team work
- develops research/library skills
- can be used to develop interdisciplinary skills and knowledge
- can be used to develop understanding of committee procedures
- can be used to recognise achievement of consensus.

Action learning sets

Action learning sets are groups who work together to learn about a particular topic. One or more students with prior experience and knowledge may assist the others. The topic may be divided for research by different members, who then share their findings.

The teacher provides relevant background information or guidelines; clarifies the purpose of the task; establishes performance criteria; provides resources where necessary; and acts as a consultant to the group.

This strategy is particularly useful for well motivated students with good study skills.

Uses:

- Involvement and participation with peers can increase commitment to and responsibility for learning.
- The combination of different learning styles and strategies, drawing information from a variety of sources, can produce a rich learning experience particularly suitable in training people for co-operative and collaborative employment situations, and especially where teamwork is concerned.

Laboratory science teaching

What is it?

It provides real or simulated situations to enable students to learn by experiment and experience, and develop their scientific knowledge and skills in a scientifically resourced environment.

Why use it?

- to practise a range of scientific skills, linking theory with practice
- to carry out scientific experiments.

When should it be used?

- to demonstrate and practise scientific principles and techniques
- to test how and why things work.

Who is it suitable for?

- individuals and groups who can benefit from hands-on active learning.

What resources might be used?

- a range of specialised scientific teaching and learning equipment in the science lab itself
- technical support for setting up experiments and clearing away afterwards
- health and safety information and precautions.

How can the learning be assessed?

- observation of skills
- written reports of experiments
- accuracy of techniques and results
- oral and written questions
- peer group assessment.

How can the strategy be evaluated?

- by allowing time for direct feedback at the end of laboratory sessions
- by reviewing the experience and outcomes, checking whether the activity has contributed to understanding.

Laboratory science teaching key points:

- Thorough and careful preparation is essential.
- Ensure suitable equipment, apparatus and/or chemicals are available in sufficient numbers/amounts for students.
- Ensure that the practical activity is sandwiched between introductory and concluding sections.
- Clarify aims of the practical session and what students are expected to achieve.

- If an initial demonstration is required, practise it in advance, considering, for instance: can everyone see? can it be repeated? can it be shown slowly at first?
- Include information on safety factors in handouts, and explain verbally as well.
- Invite questions during the introduction to ensure instructions are understood.

Lecture

What is it?
It is a formal, teacher-centred oral presentation of information. Ideally it consists of an introduction and rationale, the main content organised into relevant sections, and a summary of the content providing the transition to further learning events.

Why use it?
- to get information across to students in a relatively short period of time
- to integrate a large amount of material from a variety of sources to provide an overview of a topic
- to focus on a specialised subject
- to generate interest in and enthusiasm for a topic.

When should it be used?
- particularly useful to save time and costs
- when a visiting expert is available for a short time.

Who is it suitable for?
Large groups of learners with good listening skills, powers of concentration, attention spans, and study skills.

What resources might be used?
- ideally, a tiered lecture theatre, with a sound system and good visual aids
- handouts supporting the lecture and the visual aids.

How can the learning be assessed?
Revision questions, gapped handouts, multiple-choice questions, essays, tests, examinations, oral questions, quiz games, practical activities, tutorials and seminars, dyads and triads.

How can the strategy be evaluated?
Student evaluation forms, video recording of lecture, interviews with students, tutorials.

Lecture key points:
- Prepare well and know the topic.
- Structure the lecture with an introduction, the content and a summary.
- Break the content appropriately into short sections, with a review to recap on key points at the end of each section.
- Where appropriate, use dyad and triad exercises within lecture sessions.
- Arrive early to get organised.
- Use notes as prompts (but don't read from the notes).
- Use the framework for the lecture as an aid/structure for note-taking.
- Ask learners to move forward if seats are left empty at the front.
- Make eye contact with all of the audience.
- Use appropriate gestures and facial expressions.
- Use a range of high quality visual aids.
- Work on voice quality and projection.
- Provide visual and audio stimulation.
- Use appropriate language.
- Involve learners by inviting questions.
- Use humour, metaphor, and imagery to add interest and aid understanding.
- Be confident and in control.
- Where appropriate, follow up with tutorials, practical sessions, or seminars.

Strategies allied to lecture

Mini-lecture/lecturette/verbal exposition

This is a brief lecture used with other strategies. It is a useful way to introduce a topic, give instructions, update information or background information, and summarise learning events.

Seminars

A seminar is a student meeting usually set up to revisit and consolidate learning in a lecture. A large group of students who attended a lecture isbroken down into seminar groups to explore and develop the issues raised in the lecture. The seminar may be led by someone other than the lecturer. It should be tightly structured and focus on particular issues or goals. It usually involves discussion, question and answer, but can incorporate other techniques.

Role play

What is it?
Role play replicates real or imaginary situations with particular emphasis on the roles people play. Students participate in a dramatic representation of people's actions and feelings in a situation. Roles can be very specific, with clear briefings, or open-ended. Briefing about the situation and roles and debriefing afterwards are essential components of role play.

Why use it?
Role play can be a highly effective device for influencing and understanding attitudes, feelings and human situations. It can be risky, because it encourages expression of real emotions, attitudes and prejudices. With effective debriefing, it provides an opportunity to challenge and modify aspects of behaviour.

When should it be used?
Role play can be time consuming. It must include a briefing, when students are told about the situation and the roles they will play. This may also require role briefing instruction handouts, and/or groupwork to allocate roles and plan how the situation will be enacted.

The actual acting of the situation may be relatively brief. It may be useful to video-record it.

Debriefing, when roles and interactions are discussed and analysed, can be a source of meaningful learning. It is vital to help actors come out of their roles, and particularly important, therefore to allow ample time.

Who is it suitable for?
It is suitable for any students who can benefit from considering the actions and feelings of other people. It is helpful preparation for working with others in a variety of situations.

What resources might be used?
Briefing, role and debriefing sheets may be required. A video camera and playback facility can be useful. Sufficient space will be needed for acting out the scenario. Other resources will depend upon the nature of the role play.

How can learning be assessed?
The debriefing session provides an excellent opportunity for self, peer and teacher assessment. Students can be encouraged to articulate their feelings about and understanding of the situation, and it will be possible to assess the extent to which attitudes have been affected. Video playback can facilitate assessment.

How can the strategy be evaluated?
Teacher and students reflect on the process and outcomes, and consider to what extent the particular form of role play proved to be a valuable way of learning.

Role play key points:

- Begin with simple, structured exercises with clear briefing, enactment and debriefing components.
- Manage time carefully. Always allow sufficient time for debriefing, as much of the learning takes place here, and some actors need time to emerge from roles.
- Collect a range of role play materials. These can be commercially published, or devised by the teacher. Adapt them in the light of experience and reflection.
- Get to know your students and consider how they might benefit from playing a

particular role, and why certain roles may be unsuitable.

- Encourage students to be natural in their roles, and to respond spontaneously to the situation as it unfolds.
- Students who are to be observers should be briefed on what to look for.
- Avoid the term 'role play', as it can be a 'turn off' for some students. Instead, introduce the session by saying 'I would like us to learn about this situation by considering and trying out the parts which people might play'.
- Relate learning to real life experiences.

Rote learning

What is it?
Traditionally it was called 'repetition' and more recently 'rehearsal'. Students learn by going over the same information, skills and knowledge until they are proficient to a required standard. Arguably, it is the repetition that enables the student to remember. Afterwards, students can test themselves and peers.

Why use it?
- enables students to check and become responsible for own progress
- links skills in a systematic way
- assists memorisation of items that are particularly difficult to remember
- allows continuous guidance from the teacher (ie, 'Repeat after me')
- provides possibility of remembering through repeating the task
- develops self-checking skills
- can be checked against standards; tangible outcomes for self-assessment
- can be used to teach 'mechanical' systems that are needed before new learning can take place.

When should it be used?
- in some instances when other teaching methods have not facilitated learning
- when students have difficulty remembering various systems, information, formulae, and so forth
- when a skill or knowledge requires quick development
- when the teacher requires students to check own progress
- as a group exercise: students use repetition with peers, make mistakes and learn together
- when individuals need to check, recall, and correct knowledge, or master skills
- to practise when certain aspects have not been grasped
- after a demonstration, to check understanding of practice
- in coaching individuals.

Who is it suitable for?
It is often used in language, drama, music and practical skills-based courses, especially where precision and accuracy play an important part in developing skills and knowledge.

What resources might be used?
- time and opportunity to practise skills until accurate.
- tutor and/or peer to check performance
- clear and correct procedures and information, written or oral
- correct and sufficient materials to allow for repetitive exercises, especially in practical subjects
- any relevant equipment
- videos can be useful and cost effective.

How can learning be assessed?
- against oral or written instructions
- observation of practical tasks
- through listening skills
- question and answer for feedback
- peer assessment on both oral and practical achievements.

How can the strategy be evaluated?
- Students can discuss this strategy and compare with other methods to decide whether it was a useful learning tool.
- If learning objectives are achieved, it can be assumed that the strategy is appropriate.
- The suitability of the strategy can be checked on its own and in conjunction with other methods or resources.

- It is possible to monitor how quickly skills are gained, recalled, repeated and transferred to other learning situations.
- It can be evaluated through discussion, question and answer, and in tutorials.

Rote learning key points:

- Discuss and negotiate using the strategy with student.
- Think about its suitability for the topic and the learning style of the student.
- Give clear instructions and guidance.
- Students must be able to identify and link with previous learning, and transfer to new learning experiences.
- Students must be able to identify learning through self-assessment.
- Students must observe the task and/or hear the information properly and in the correct context to copy it appropriately.

Simulation

What is it?
A simulation is a replication of a real situation. The classic example is flight simulation for training aircraft pilots, but the applications are very broad.

Why use it?
Simulations make the learning context more relevant and realistic. They are particularly useful for enabling students to practise and acquire skills in a safe context, so that they develop the confidence and ability to succeed in real-life situations.

When should it be used?
It should be used when the real situation is inaccessible. It is particularly relevant for very complex, difficult or potentially dangerous tasks, because it enables students to learn from mistakes without damaging consequences.

Who is it suitable for?
Students in training for vocational work and those needing to develop or practise skills in a safe but realistic environment.

What resources might be used?
Ideally simulated resources should be as close to the real thing as possible, but students usually accept using some imagination.

How can the learning be assessed?
By observation, questioning, checking performance against performance criteria, self-assessment, and so forth.

How can the strategy be evaluated?
By direct feedback and review of performance and outcomes.

Simulation key points:

- Prepare equipment/resources taking account of health and safety issues.
- Prepare students for the activity.
- Ensure shared purpose of activity by explaining why simulation is necessary.
- Relate theory to practice.
- Relate the exercise to the real situation.
- Encourage students to take responsibility.
- Praise correct practice.
- Supervise closely to rectify errors.

Skills practice/ Practical

What is it?
This is provision of hands-on practical experience. It enables students to get the feel of an activity, and test out theory in practice.

Why use it?
It enables students to try out their skills and learn from experience.

When should it be used?
Following a lecture or demonstration, or when the emphasis of a programme is on practical skills development.

Who is it suitable for?
Students who need to develop practical skill, who have sufficient confidence to attempt the skill, or who need to unlearn and relearn skills.

What resources might be used?
The material and equipment necessary to carry out the skill, including any protective clothing and health and safety provisions.

How can the learning be assessed?
By direct observation, self-assessment, peer assessment and checking against performance criteria. Most practicals include a test element. Knowledge and understanding underpinning the practice should be determined.

How can the strategy be evaluated?
By direct feedback and review of skills development.

Skills practice/Practical key points:

- Prepare materials, equipment, students, health and safety provisions.
- Props, location, and instruction sheets should be as realistic as possible.
- Give clear information about the task and procedures.
- Present clear performance criteria.
- Use praise and encouragement.
- Ask questions for understanding of good practice.
- Analyse what impedes good practice.
- Link theory and practice.
- Promote reflective practice by students.

Individual tutorial

What is it?
It is a two-way exchange between tutor and student involving explanation, listening, and feedback in both directions.

Why use it?

- to check out learning strategies, learning, and the appropriateness of teaching strategies
- to be cognizant of personal matters affecting learning and help the student get specialist support where necessary
- to provide learning support, help with study skills, action planning, portfolio compilation, project work and so forth
- to support the learner's preparation for a work placement or visit
- to support during a work placement
- to assess and review progress, encourage the student to make choices, and prepare for transition to the next stage where appropriate
- to boost the student's self-esteem and motivation.

When should it be used?
When students need: individual help with the management of their learning; individual preparation for or feedback from a test; or to make decisions about the next steps.

Who is it suitable for?
All students in colleges moving towards a flexible client-centred approach; those on competence-based or flexible learning programmes; those who need support because of personal difficulties; and those preparing for or engaged in work placements.

What resources might be used?

- time!
- small room arranged for counselling
- programme documentation, resource bank, tutor handbook, individual action plan, record of achievement etc.

How can the learning be assessed?

- through feedback from other teachers, data on achievement, and so forth
- through direct observation of the learning strategies, process and outcomes employed in the tutorial.

How can the strategy be evaluated?
Through direct student feedback, and review and reflection on tutoring skills.

Tutorial key points:

- Clarify rules of confidentiality, and the objectives for the tutorial.

- Prepare the environment to facilitate good communication and minimise distractions.
- Have the necessary documentation and resources to hand.
- Use basic counselling and support skills.
- Emphasise students' responsibility for their own learning, and avoid over dependency on the tutor.
- Keep knowledge of support services up to date.
- Use 'how' and 'why' questions.
- Be willing to listen to and understand personal difficulties.
- Suggest appropriate learning strategies.
- Build student self-esteem and motivation.
- Encourage openness about errors and misunderstandings.
- Use praise, encouragement, and humour.
- Establish contracts, action plans, targets.
- Manage the time effectively, allowing sufficient time for summarising and concluding.

Strategies allied to tutorial

Group tutorials

The same principles apply broadly to group tutorials. However, these do not allow the same individual focus on the learning process. It is essential to create a supportive learning environment, with respect for confidentiality. When working with groups, it is important to recognise that individual learning may be prevented by the need for individual performance. Individuals may deny the truth to avoid loss of face in the eyes of their peers.

A structured agenda can facilitate a disciplined, businesslike meeting, especially if the group is encouraged to generate agenda items. A small group tutorial can clarify issues which are not fully understood, and provide a useful follow-up to open learning, lectures and so forth.

Peer tutoring

The value of peer tutoring should not be underestimated. Like any other technique, it needs to be understood, and used appropriately.

Students can be encouraged and motivated by peers who have accomplished a skill, especially those from a similar background who have faced and overcome difficulties. However, peer tutors need to be helped to acquire tutoring skills, so that they understand that others may need to use different strategies.

Peer tutoring benefits both tutor and learner, because teaching a skill enhances development of a skill. Students appointed as peer tutors are likely to receive a boost to their own self-esteem.

Question and answer

The teacher challenges the student's basic assumptions and understanding by probing. Open questions encourage students to think carefully about their interpretation of a subject. The teacher models self-questioning and critical thinking to promote effective learning. This strategy can be incorporated within tutorial sessions and most other teaching strategies.

Workshop

What is it?

This is a resource setting where students can develop skills and link theory with practice. The workshop may be a simulated work setting with relevant equipment, or it may provide resources for the development of skills in a particular subject.

Workshops require supervision, especially regarding health and safety or security issues. Students work individually or in small groups, at their own pace, using problem-solving strategies. The teacher acts as a learning manager or consultant, working with indivi-

duals or groups, with the emphasis on promoting independent learning skills.

Why use it?

- as a productive working environment which may relate to a specific industry
- to enable students to work at their own pace alongside others and develop skills whilst working co-operatively.

When should it be used?
When the teacher needs to work on a one to one basis with students; when students need to develop skills and techniques; or when theory needs reinforcing in practice.

Who is it suitable for?
It is suitable for most students, providing that due account is taken of individual needs including health and safety. It is particularly useful for developing specialised skills.

What resources might be used?
Resources relevant to the development of the identified skills and techniques. Resources for developing vocational skills should be as realistic as possible. However, workshops can be run successfully using good simulation and improvisation measures.

How can the learning be assessed?
By direct observation of skills.

How can the strategy be evaluated?
Student feedback, industrial consultation.

Workshop key points:

- Prepare and check all resources, with particular reference to health and safety issues.
- Prepare briefing sheets/instructions/guidelines/work schedules/assessment schedules.
- Use demonstration and coaching techniques where appropriate.
- Monitor individual and group performance. Question, rectify and give feedback.
- Encourage individual and group problem solving where possible.
- Link theory with practice.
- Share teacher time fairly among participants.
- Allow ample time for concluding and tidying up.

Using a combination of teaching and learning strategies

The following practical example illustrates how teachers can combine a range of different strategies in delivering a learning programme.

Mechanical Engineering Services – Plumbing

The Plumbing Course team at Barnsley College, responding to changes within Further Education, recognised the need for flexibility and adaptability in implementing current course provision; the need to be pro-active in the development of additional course programmes; and the need to expand the range of provision, to enable and encourage increased student participation.

Course profile

This case study makes reference to the CGLI 603 Mechanical Engineering Services Plumbing Advanced Craft Course which, for certification, requires successful completion of six modules related to understanding the principles and practices of building services installations in dwellings, public and industrial buildings, including installation, testing, commissioning and maintenance of systems; completion of related written assignments; and undertaking six CGLI externally set examinations.

The NVQ Level 2 Mechanical Engineering Services Plumbing Course programme also includes the installation of buildings services systems in dwellings, plus modules relating to maintaining a safe working environment, effective working relationships, promotion of quality within the industry, and encouragement of energy efficiency.

Candidates compile a portfolio of evidence indicating competence in practical work, underpinning knowledge, and supplementary assessments. Successful outcomes and award of an NVQ Level 2 qualification are determined when sufficient evidence is submitted to show all required performance criteria have been met.

Candidate profiles

CGLI 603 MES Plumbing Advanced Craft Course

Sixteen candidates are enrolled on the course, eight of them post-YT students who have successfully completed the CGLI MES Plumbing Craft Certificate course. Eight are currently employed in the plumbing industry. The remaining eight adult students successfully achieved certification at craft level within one year of attendance at college. Their previous industrial experience was in mining. Two of this group are employed as plumbers, three are on work experience and three remain unemployed. Entry qualifications ranged from GCSE C to E grades, a CGLI Craft Certificate in Mechanics, and a CGLI Craft Certificate in Electrical Servicing.

NVQ Level Two MES Plumbing Course

Seventeen students are enrolled on this course, eight of them adult students not previously employed within the plumbing industry. Nine students prior to enrolment were school leavers and are currently combining college attendance with work experience at local plumbing companies.

Qualifications previously attained by the group include GCSE grades B to E. One student achieving CGLI Craft Certificate in Mechanical Engineering.

Attendance patterns

CGLI 603 MES Plumbing Advanced Craft courses are programmed for day release over a two year period. Unemployed students wanting to qualify within a shorter time frame may take advantage of the 'under 16 hour rule' and attend part time over one year.

The NVQ Level 2 MES Plumbing course attendance pattern is similar. However, candidates may achieve certification within a shorter (or longer) timescale depending on submission of sufficient evidence to demonstrate competence to meet all required standards.

Full-time students on this course attend five days per week. During work placement attendance reverts to one day per week.

Clearly, students enrolled on the same courses have differing patterns of attendance, ranging from one day per week over two years to two days per week over one year, and full-time students attending five days a week in block release stages. Such diversity in attendance patterns, abilities, individual needs and motivation, plus the need to maintain viable group numbers and SSRs, require the plumbing course team to adopt flexible, adaptable strategies and to implement appropriate teaching strategies to ensure sufficient learning opportunities to meet the individual needs of the students.

The teaching strategies employed and learning opportunities provided are mutually agreed during induction, or as and when students enrol on course programmes throughout the year. Reviews are held regularly.

Teaching strategies

The teaching strategies implemented by the Plumbing Course team include: lecture, open and flexible learning, coaching, role play, and tutorials. All relate in the main to the technology and underpinning knowledge sections of the overall course programmes.

In addition, simulation, demonstration and skills practice are implemented for the achievement of practical competencies with evaluation being undertaken throughout all course programmes.

Lecture

This is adopted initially on all courses, particularly with new students with little or no previous knowledge or experience of plumbing. It is used to promote understanding of the industry and its controlling organisations,

programme structure and content, basic principles, processes and practices, assessment and action planning, assessment procedures, and production and presentation of evidence.

Lectures are supported with resource material, including handouts and video recordings. Evaluation is by means of feedback sessions and student evaluation questionnaires.

Open and flexible learning
This is applied to all courses. It uses resource material to support lectures and course assignments. The strategy has proved ideal in aiding understanding and learning, meeting individual needs, and promoting self-assessment.

Resource-based packages produced by Dudley College, Wakefield College and the Further Education National Consortium are used on all plumbing courses using learning centres and bases and involving home study. They have been particularly helpful to students with no previous knowledge of plumbing installation.

Evaluation of open learning material is generally by self-assessment and feedback sessions.

Coaching
This is adopted, in particular, for NVQ students where competence is demonstrated by completion of Activity Records indicating performance criteria achieved, work-related log books, witness testimony, and supplementary questioning in written and oral form, which probes the candidate's underpinning knowledge and ability to handle contingencies.

The coaching strategy is particular useful for breaking down each of the component elements, and setting easily identifiable aims and objectives with an explanation of the sequence of achieving competence in each element. The strategy also facilitates monitoring of progress at each stage with regular feedback sessions.

The coaching strategy is also used on CGLI course programmes, but to a lesser extent with advanced craft students who have demonstrated competence by progression to this level of study. However, it is offered to students who have difficulty completing assignments and who may require more guidance and feedback to aid understanding and progression.

Role play
This is used on all course programmes up to NVQ Level 2 and Craft Certificate Level to replicate real life situations. It is particularly effective in developing students' understanding and confidence in implementing correct procedures in the event of an accident or emergency.

In the NVQ Level 2 course element 'Maintain the Safe Working Environment', students use role play to demonstrate First Aid and emergency procedures for minor cuts, minor burns and electric shocks, actions in the event of a fire and when fire or emergency warnings are heard. Students also use role play to demonstrate how to summon emergency services and use emergency equipment.

Role play is also used for the element 'Maintaining Effective Working Relationships'. Students demonstrate telephone techniques and communication with customers, clients, contractors and suppliers.

Students are aided when role plays are video recorded, and reviewed and evaluated by self, peer group, and assessor. Debriefing and feedback sessions enable reflection on best practice, and where improvements can be made.

Tutorial
Individual and group tutorials take place with all groups, but more frequently with NVQ Level two full-time students, who tend to need more support than adult students. Tutorials provide a two-way exchange of explanation and feedback. They aid progress by providing learner support, assistance with study skills, action planning using the college-produced software 'Tracker Pack', compilation of activity records, work-related log books, and project work.

Tutorial time enables individual assessment and review of progress, and provides opportunities for students to express concerns and receive support, to facilitate understanding, promote motivation and encourage progress.

Simulation
This is used on all plumbing courses to replicate real work situations, as course programmes

require students to demonstrate practical competence in the installation, testing, commissioning and maintenance, of all building services systems: hot and cold water services, heating, gas and oil, above and below ground drainage, sheet weathering and so forth.

Companies specialising in one or two installations (eg, heating engineers or gas fitters) are unable to provide work-based training covering all aspects of system installation. Therefore, a realistic simulated work environment is provided within college. Students can install fully operational systems in five purpose-built two storey houses, plus workshop with 18 cubicles and two simulated roofing areas.

Simulated provision allows all students, particularly those who are unemployed, to demonstrate all required competence and outcomes.

Demonstration Strategy

This strategy is used at the start of all course programmes, particularly with new students with little or no knowledge or experience, to demonstrate the correct methods and techniques used in the acquisition of practical skills.

Demonstration is also useful in rectifying incorrect practice and reinforcing correct practice, particularly when introducing new skills. Demonstrations are initially given to small groups, with additional individual guidance.

Video recordings of students demonstrating practical skills, made initially to provide evidence of competence, are also used by students to review their performance. Self, peer and assessor appraisal and feedback sessions enable students to identify good practice and decide where improvements may be made.

Assessments involve checklists, and evaluation is made via student observation and feedback sessions.

Skills Practice Strategy

This strategy is employed on all plumbing course programmes requiring demonstration of competence in practical skills related to the installation of building services systems.

Practical skills identified by CGLI students are demonstrated by completing college assignments and CGLI examinations, and inspections and surveys of existing boosted hot and cold water, heating and air conditioning systems, such as those at Barnsley General Hospital, as well as fire fighting systems in Remploy Furniture factories.

NVQ courses also require demonstration of practical skills related to building services systems in dwellings, which are assessed in college and at the student's place of work. Assessment on all programme areas is by direct observation, checklists, witness testimony, and self-assessment authenticated by supervisors and lecturers, with evaluation by feedback sessions and review of skills development.

Conclusion

The plumbing course team are aware of rapid change in Further Education: incorporated colleges, funding, vocational qualifications and so forth. They recognise the need for a flexible, adaptable approach, continued improvement, and a commitment to maximising development of course programmes. Such changes inevitably impact upon the curriculum, its delivery, and strategies of teaching and learning. Implementation of the strategies described has been in direct response to these changes.

The course team's philosophy, therefore, is one of enhancement of learning opportunities, for traditional and non traditional students, by adopting a client-centred approach, focusing on the individual requirements of students, providing flexible learning opportunities, adopting teaching strategies most appropriate to the needs of the students, and offering constant support to aid progression, achieve certification, and enable students to meet the ever changing requirements of industry.

W.E. Bowes, Barnsley College
February 1995

Sadly, Bill Bowes died shortly after writing this report. We are grateful for his contribution. (Ed.)

3. Evaluation of teaching strategies

The purpose of evaluating teaching

Throughout this document emphasis has been placed on the importance of looking back at what you have done, how you have done it, and the impact it has had. Evaluation serves the following purposes:

- It is a means of checking teaching progress and development and considering solutions to problems.
- It provides feedback on the efficiency and effectiveness of teaching strategies, so that improvements can be made.
- It is a means of checking your own performance, and identifying what is needed and why.

Evaluation methods

Different teaching strategies lend themselves to particular methods of evaluation. The following describes a range of potential methods:

Student questionnaires
These can take a variety of forms, including checklists, rating scales, ranking scales, and open or closed questions.

They need to be structured, with clear explanations for completion. Open questions are likely to produce more detailed information, but may be difficult to analyse with large numbers.

Student diaries, logs and written reports
Students can be asked to incorporate feedback on teaching strategies into their learning logs. In recording their learning experiences, students can be asked to consider how the teaching strategies affect the learning.

Peer observation and feedback
A colleague can observe the teaching and give feedback using a questionnaire, checklist or notes. There should be ample time allowed for discussion following the observation.

Checklists for teaching observation and feedback are given in the Appendix.

Direct observation of student performance
Sometimes it is possible to evaluate a strategy directly by observing how students perform in response to it. If they are performing well, demonstrating knowledge and understanding, then the strategy can be deemed successful.

Oral feedback from students
This can take various forms, including individual group interviews, individual and group discussions, and on-task direct questioning. All of these can be structured, semi-structured or unstructured. Group discussions can generate a lot of feedback, but they need to be structured.

Self-evaluation
This involves recording and reviewing your own findings and observations on how your strategies have worked.

Processes and Outcomes
There is currently emphasis on the outcomes of educational programmes. It is over simplification to assume that a strategy is good if targeted goals are achieved. We need to look at the learning processes, and the quality of learning that has taken place, as well as the outcomes.

The most useful evaluation test for any teaching strategy probably lies in its acceptability to the learners. Further education is based on voluntary attendance and participation. Retention rates are, therefore, useful indicators of student evaluation. A variety of evaluation methods can help the teacher consider the strategies from different perspectives. Evaluation provides data for action research and reflective practice.

Action research and the reflective process

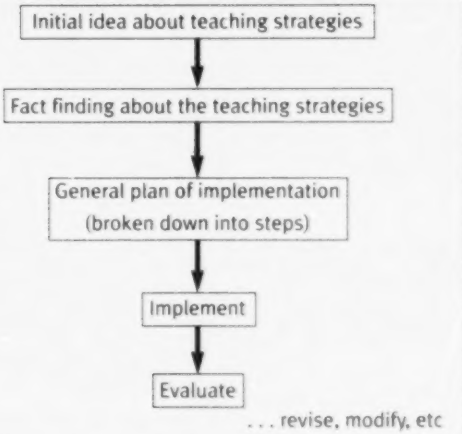
Action research is about improving practice, rather than producing knowledge. Teachers who want to develop their practice need to reflect on the value of the teaching strategies they use in relation to the learning process and outcomes. Improving practice involves

consideration of the quality of both the learning processes and the learning outcomes in a particular set of circumstances.

The value of any experience is context-bound. Therefore reflection on one teaching experience helps to determine a course of action for another. This can be regarded as action research; further reflection can lead to further development. The process enables teachers to experiment with and develop a wider repertoire of teaching strategies to apply flexibly as the context requires. Collaboration with colleagues and learners provides feedback upon which teachers can reflect on their own practice.

The following simple model of action research (Figure 7) applied to teaching can be used to promote professional development.

Figure 7. Action research applied to teaching


Initial idea about teaching strategies
Fact finding about the teaching strategies
General plan of implementation (broken down into steps)
Implement
Evaluate
. . . revise, modify, etc

Reflective practice

Reflective practice encourages teachers to reflect critically upon the principles and practices underlying their work, and to be prepared to change or modify their teaching in response to feedback. It requires teachers to make use of peer review, student feedback, and time to think about the efficiency and effectiveness of their teaching strategies.

Reflection provides a means of improving professional judgement. It enables teachers to draw out the learning potential from their teaching experiences. The capacity to reflect critically and respond flexibly should be developed by all teachers who recognise the need to review and adapt their teaching in order to improve their performance and adapt to the changing FE scene. The need for the reflective process in teaching is represented in Figure 8.

Figure 8. Reflective practice in teaching

Teachers who do not recognise the need for this process might be challenged by the following questions:

- Can you be completely objective about your own performance?
- How can you know that you are teaching well without feedback?
- Would it be useful to get feedback about problematic areas so that something can be done to change them?
- How can you develop without feedback?
- How will you ever change what you do without reflecting upon what you do?

Reflective practice can incorporate peer review and feedback, student review and feedback, and self-questioning to reflect critically on teaching and learning strategies. It is helpful to keep a record of teaching experiences as a reference for reflection.

The following checklist for reflective practice can be used with peer review, student review, self-review, appraisal and mentoring.

In this teaching event, have I:

- defined appropriate learning objectives?
- taken account of the learner dimension and the learning process?
- given due consideration to team, institutional, work and national perspectives?
- used strategies which facilitate the achievement of objectives?
- used strategies which are most appropriate in these particular circumstances?
- interpreted the strategies to suit these particular circumstances?

The skills of giving feedback

An important part of reflective practice is the exchange of feedback between peers.

Anyone providing feedback should be encouraged to develop these essential skills:

- Be clear about what you want to say.
- Start with the positive.
- Be specific.
- Select priority areas.
- Focus on the behaviour rather than the person.
- Refer to behaviour that can be changed.
- Offer alternatives.
- Leave the recipient with a choice.
- Own the feedback and consider what it says about you.
- Give the feedback as soon as you can after the event.
- Summarise in a positive and constructive way.

Peer review and feedback

This requires a flexible arrangement for teachers to work together, usually in pairs, with the aim of improving practice. The process can involve:

- joint consideration of potential teaching strategies (refer to checklist)
- identification of good exponents of potentially suitable strategies
- modelling of approaches
- practice of the approach by a teacher new to it
- observation and feedback on how the teacher implemented the new approach

The process should be seen as part of professional development. It requires trust and collaboration, so colleagues working together in peer review must be compatible.

(Potential models for evaluation of teaching strategies are given in Appendices 1–4.)

Student review and feedback

To accept and value student review and feedback, is to recognise learning as the product of interaction between the student, the teacher, and the learning resource. The student's characteristics and experiences contribute significantly to the learning, as do the teacher's to the teaching. In partnership, the teacher and learner consider which teaching and learning strategies best assist the learning process and outcomes. Student review and feedback on teaching and learning strategies can be built into student-centred strategies such as role play, tutorial and simulation. Formal methods such as lecture can be reviewed using evaluation forms.

The key questions are:

- How did the chosen teaching strategies influence learning?
- What alternative teaching strategies could have improved the quality of learning?

Just as teachers can over-rely on particular teaching strategies, students can over-rely on particular learning styles. Both benefit from collaboratively considering the benefits of new approaches.

Self-review through action research, reflection and feedback

Self-review requires commitment to improving self-awareness and understanding. Teaching methods reflect teachers' backgrounds,

experiences, beliefs and values. Teachers cannot divorce themselves from the professional cultures within which they work, which provide a vital context for how they teach. Nor can teachers ignore the impact upon education of political and technological forces. Consequently self-review is context bound.

Self-review recognises that rigid attitudes may prevent adapting in situations that demand change. Action research requires a willingness to experiment with new approaches. Reflection involves recalling what happened and considering what went well, what went wrong, and what can be done to improve. Accepting feedback involves listening to others' interpretations and opinions about the teaching. The process should yield important insights into what needs to be changed, what continued, what relearned, what developed, and what begun.

The model for reflective practice (Figure 9) helps you consider your feelings and observations about your teaching practice, along with the feelings and observations of others. Questions to ask yourself and others might include:

- How far have I developed in the desired direction and what more can I do?
- Can I break out of habits and experiment with new methods?
- What new things am I able to do?
- What do I now do with confidence that I previously did with apprehension?
- In what ways do I see learners/ colleagues and others differently?
- Do I feel different when I am teaching?
- What do I want to do differently next time, and how?
- What do I want to repeat and why?
- What new directions do I want to take?

Good teaching is highly dependent upon the amount and quality of information teachers receive about what they are doing. Negative feedback can be painful, but it can spur to renewed efforts or point to what needs to be rectified. Positive feedback boosts confidence and self-esteem, and motivates continued development. Teachers should encourage and make use of constructive feedback by asking open-ended and structured questions. The Jo-Hari Window (Figure 9a) provides a useful way of looking at why we need feedback.

Figure 9a. Jo-Hari Window

	You know about this	You don't know about this
Others know this about you	1. Open	2. Blind
Others don't know this about you	3. Hidden	4. Unknown

1) Open Section
This is the most important section of the window for teaching purposes, because this is where we share our thoughts, agendas, and purposes with students and peers.

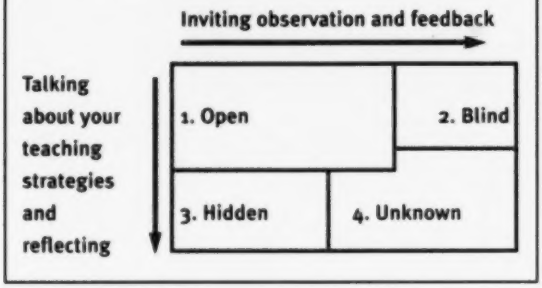
2) Blind Section
This is a potentially painful section of the window. Students and colleagues may express concerns or appreciation for our teaching, but unless we seek feedback we cannot act upon it.

3) Hidden Section
This is the section where we wilfully hide facts, feelings, and skills from others for reasons best known to ourselves.

4) Unknown Section
This is the exciting section of potential discovery, where we continue to find out about ourselves and the world we live in.

Through accepting and using feedback and reflective practice it is possible to change the dimensions of the 'window' (Figure 9b).

Figure 9b. Jo-Hari Window applied to reflective teaching



Responding to feedback

Sometimes it is difficult to respond to feedback because:

- Analysing your own behaviour requires self-confidence.
- The feedback can make you feel disappointed or unhappy about the situation.
- Criticism isn't easy to take and you can easily become defensive.
- It can be difficult to pick yourself up if you've been put down.
- Feedback may be mixed or unclear, and it may be difficult to distinguish between assumption and facts.
- It can be particularly hard to take if you are without support and feeling threatened/vulnerable/alone.

A framework of support for reflection and response to feedback can help to promote professional development.

Reflective practice and professional development

The role of the mentor

A mentor accepts responsibility for supporting and guiding another person through the process of self-evaluation and personal and professional development. Usually the mentor is a member of your peer group at work. The role of the mentor is:

- to provide support in the self-evaluation and reflection process
- to help prepare action plans for professional development
- to discuss the relative merits of teaching and learning strategies
- to assist in networking with other members of staff and external agencies
- to uphold the confidentiality of the relationship

A mentor often helps create the balance between inertia and trying to change the world. The need to change and develop should be informed with knowledge and experience, and tempered with sound judgement.

(Checklists for teaching observation and feedback are given in the Appendix.)

Appraisal and professional development

The purposes of appraisal

A variety of appraisal models and methods operate throughout the business and industry sectors. Inherent in appraisal is an irreconcilable conflict between a scheme based on accountability and one whose purpose is professional development.

In an accountability model, the aim of appraisal is to assess performance in order to make decisions about promotion, performance-related pay, dismissal and so forth. In a professional development model, the aim of appraisal is to develop skills and career prospects for individuals, and thereby produce organisational improvements.

Currently in FE the majority of appraisal models are professional development models. The success of the professional development model depends on individuals being frank, open and forthright in an atmosphere of trust and confidentiality. However, if appraisal includes any elements of the accountability model (such as performance-related pay), it may inhibit the appraisee's openness and frankness on which hinges the success of the professional development plans.

Using appraisal to improve teaching and learning strategies

The following basics of an appraisal framework should be in place within the institution:

- an institutional appraisal system about which appraisees and appraisers are fully informed
- trained appraisees and appraisers
- an agreed cycle of appraisal which usually includes: a schedule of events, a planning meeting for appraisee and appraiser, a period of information gathering during which some observation takes place, an appraisal interview in which achievements and targets are agreed, a statement of achievement and targets, and a follow-up meeting.

Used positively such an appraisal can produce the following individual and organisational benefits:

- visibility of achievements and targets
- audit of staff development needs
- linkage of development needs of the individual and the institution
- updating of job descriptions
- improved negotiation processes within the institution
- indication of future staffing/recruitment needs of the organisation
- a written record of career achievements and targets for the individual
- improved understanding of individual job roles
- feedback about performance
- improved recognition of individual strengths and needs
- opportunity to identify problem areas
- clearer working goals
- improved performance.

For staff members for whom delivery of teaching and learning is identified as a task or set of tasks to be observed, or as an area of achievement or potential development, the guidance in this report can form the basis of reaching agreement on an action plan for selecting and evaluating teaching strategies.

Part 2 of the report will be particularly useful for carrying out an audit of strategies used and areas of potential development. The 'teaching strategies checklist' and 'framework for evaluating teaching strategies' will assist this process.

Part 3 of the report provides information about evaluation and reflective practice which is pertinent to both appraiser and appraisee, and could form a basis for mutual understanding of professional development.

(Checklists for teaching observation and feedback are given at Appendices 1, 2 and 3.)

Personal development/achievement logs and professional development

Some FE colleges have adopted the use of personal logs, sometimes used in conjunction with mentoring or appraisal systems. The logs focus on the personal and professional development of the individual staff member, and take account of institutional objectives. Personal logs serve the following purpose:

- developing individual learning plans
- recording staff development activities
- presenting evidence of learning and development
- self-evaluation relating to staff development needs, roles and responsibilities, job description, institutional and team goals, and so forth
- updating CVs and personal statements
- action planning and recording progress.

This report can help in formulating a personal log. Part 1 provides a general update on the changes in FE. Part 2 facilitates audit and update on teaching strategies. The teaching strategies checklist and framework for selecting and evaluating teaching strategies are useful in getting started. Part 3 assists the processes of evaluation and reflection underpinning professional development.

Continuing professional development

In recent years there has been a thrust towards curriculum rigour and relevance, and technical rationality through such initiatives as the

National Curriculum, and National Vocational Qualifications. Many teachers have focused their professional development on equipping themselves to work within these frameworks.

Simultaneously, some teachers have sensed an erosion of their professional autonomy, with less freedom to teach what they believe in. Some NVQ tutors who piloted this report felt it not relevant to their needs, because programmes stipulated particular teaching methodologies. Some felt there was no function for them as reflective designers of education. This raises the issue of how coherent competence-based training can co-exist with the conditions of professional reflective practice in order continually to improve training.

There is common ground. Competence-based systems and reflective practitioners need to be:

- attentive to patterns of phenomena
- skilled at describing what is observed
- inclined to generate simplified models
- ingenious in devising tests of these models
- able to cope with organisational constraints.

However, over and above this, the reflective practitioner engages in:

- critical thinking, deciding what to believe in and what to do. Critical thinking calls into play elements of truth, justice, judgement, sensitivity, rationality and self-correction.
- creative thinking, which involves searching for meaning, sensitivity to contrasting criteria, interest in wholeness, and contexts and invention.
- complex thinking, which is concerned with both procedural and substantive issues, the resolution of problematic situations, contextual relationships, and improvement in practice.

If teachers are encouraged to operate as reflective practitioners, their teaching will promote reflective learning, so that colleges become communities of enquiry. Their students are likely to be more thoughtful, judicious, and reasonable.

The development of reflective practice involves breaking old habits and doing things differently. This report suggests that reflective teaching practice requires a supportive learning climate, because it involves facing up to personal weaknesses and needs, discussing them, practising new strategies, taking risks and giving and receiving feedback. It requires from colleagues a high level of trust, mutual respect and understanding, and a commitment to professional development within the learning organisation. It also requires that FE managers and policy makers create such climates.

Appendix 1		Possible feedback for practical teaching
The list below provides a tool which can be used for appraisees to choose areas upon which they wish observation to take place.		
Activity		**Possible areas for feedback and comment**
Preparation	☐	indicates expected student learning outcomes
	☐	selects appropriate teaching and learning methods
	☐	plans introduction, development and conclusion to the session
	☐	selects and prepares appropriate learning resources
Presentation	☐	identifies current competence and needs of individuals and groups
	☐	implements selected teaching and learning methods
	☐	provides for different learning styles/processes/methods
	☐	provides structured learning opportunities
	☐	responds flexibly to classroom situations
	☐	uses learning resources effectively
	☐	supports application of learning
Classroom relationships	☐	secures student participation in the session
	☐	provides leadership for the students
	☐	promotes a climate that facilitates learning
	☐	manages group dynamics
	☐	promotes a climate of equality of opportunity
Communication	☐	uses appropriate language registers
	☐	develops students' communication skills
	☐	effectively employs skills of non-verbal communication
Assessment of student learning	☐	makes an assessment of student achievement of stated outcomes
	☐	collects evidence of competent performance
	☐	uses appropriate assessment methods
Subject matter	☐	demonstrates mastery of the subject matter which they are teaching
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Appendix 2 A teaching checklist			
	Yes	**No**	**Not needed**
Preparation Have you: generated a clear statement of aims/objectives/competences? explicitly identified the needs of the students? produced a clear plan for the lesson with: • times indicated? • a choice of appropriate resources? • a choice of teaching strategies and learning styles? • an identified introduction, development and conclusion? • planned assessment of student learning? anticipated problems and made the necessary contingency plans? Is the amount of material about right for the time available?			
Presentation Have you: identified the learning needs of the specific group? determined the entry behaviour of the students? considered the background, age, gender, racial and cultural issues? identified possible barriers to learning? managed the time effectively? In the introduction, have you: • given an overview of the session? • shared with the group the required outcomes (aims, objectives, competences)? • made links with other sessions? • created interest? • negotiated with the students within the constraints that are set? • used a logical sequence for the sub-topics? • modified the plan to suit responses? Have you used a range of teaching/learning aids including: • OHP? • chalkboard? • handouts? • white board? • flip chart? • audio? • computers? • video? • programmed learning? • resource-based learning? Have you: used a range of teaching strategies effectively? paced the presentation to suit the students and the demands of the syllabus? In the conclusion have you: given a summary of the lesson? reviewed the key issues? made links to the next lesson?			

Source: Reece, I and Walker, S (1992) ***Practical Guide to Teaching, Training and Learning****. Business Education Publishers Ltd. Reproduced with permission.*

Appendix 2 A teaching checklist, continued			
	Yes	No	Not needed
Communications and relationships Have you: communicated effectively with students? spoken clearly? introduced and explained jargon? managed the question and answer sessions effectively? answered student questions clearly? used clear diagrams via OHP, chalkboard, flip chart?			
Evaluation Have you: used a range of evaluation techniques for: • lessons? • modules? • courses? • programmes? reviewed teaching strategies? taken appropriate action in response to evaluation?			
Subject matter and others Have you: given due regard to the safety of the students? given regard to equality of opportunity for all? developed student study skills? given appropriate guidance/referral for all aspects of guidance/counselling /development? updated your own subject knowledge? updated your own teaching expertise? considered your own staff development?			
Source: Reece, I and Walker, S (1992) ***Practical Guide to Teaching, Training and Learning.*** *Business Education Publishers Ltd. Reproduced with permission.*			

Appendix 3 Checklist for evaluating your teaching

This checklist is designed to help you systematically evaluate your own teaching. The key headings might lead you to reflect on what went well and why, alongside what didn't go so well, and why.

Self-evaluation

1. Planning, organisation and timing
2. Confidence and competence
3. Knowledge of subject matter
4. Interaction: teacher to student
5. Management and control of the learning situation

Student evaluation

1. Their response to the content and teaching methods used
2. Their motivation and interest
3. Their interaction: student to teacher
4. Their interaction: student to student
5. Issued raised for possible use in future sessions

Lesson evaluation

1. Were the objectives achieved – all or some?
2. What were the most and least effective aspects of this lesson?
3. What modifications were made during the lesson?
4. What modifications are suggested for future lessons?

Self-evaluation

1. Was I clear in my presentation? How could I improve it?
2. Did the timing of the lesson work effectively?
3. If not, why not?
4. Areas to work on for next time.

Student evaluation

1. Did the students understand the tasks I set them?
2. Were the students working to the best of their abilities?
3. If not, how else could I have motivated them?
4. Issues outside my control (what they do before I teach them, etc).

Lesson evaluation

1. Were the objectives met? If not, what wasn't covered?
2. Did the students *learn* from this lesson?
3. If yes, was it what I intended? If no, what else could I try?
4. Were the materials I used appropriate? With the benefit of hindsight, how could they have been improved on?

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Appendix 4 A pro-forma for self-review of teaching	
Aspect	**Question**
Preparation	Have you: • analysed the topic/subject area? • indicated expected student learning? • identified the needs of your students? • selected appropriate teaching strategies? • written systematic lesson plans? • selected and prepared learning resources?
Presentation	• implemented selected teaching strategies? • responded flexibly to classroom situations? • used learning resources effectively? • conformed to safety requirements
Classroom relationships	• secured student participation in your lesson? • provided leadership to your students? • promoted a classroom climate which facilitated learning?
Communications	• used appropriate language registers? • developed students' communication skills? • effectively employed skills of non-verbal communication?
Assessment	• used an assessment method to consider if the objectives have been achieved?
Subject matter	• demonstrated mastery of your subject matter?
Source: Reece, I and Walker, S (1992) ***Practical Guide to Teaching, Training and Learning.*** *Business Education Publishers Ltd. Reproduced with permission.*	

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NCET **Portables in Schools**

Glossary of abbreviations used in this document

CGLI	City and Guilds of London Institute
ESOL	English as a Second or Overseas Language
FE	Further Education
F/HE	Further and Higher Education
FEDA	Further Education Development Agency
FEFC	Further Education Funding Council
FESC	Further Education Staff College
FEU	Further Education Unit
GCSE	General Certificate of Secondary Education
GNVQs	General National Vocational Qualifications
HND	Higher National Diploma
HE	Higher Education
ISDN	Integrated Services Digital Network
IT	Information Technology
MES	Mechanical Engineering Services
NCET	National Council for Education Technology
NCVQ	National Council for Vocational Qualifications
NVQ	National Vocational Qualification
OILS	Open Integrated Learning Systems
SSRs	Student-Staff Ratios
TDLB	Training and Development Lead Body
TEC	Training and Enterprise Council

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